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THE

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LIST OF CONTRIBUTORS

TO ORIGINAL DEPARTMENTS.

	Page.
BARNES, HENRY F. - - - -	109
BLAKE, J. D. - - - - -	503
DOUGHTY, W. H. - - - - -	1
EASLEY, E. T. - - - - -	297
GAMBLE, H. M. S. - - - - -	143
HILL, THOMAS - - - - -	497
LOVE, ALBERT C. - - - - -	212
MASTIN, C. H. - - - - -	101
McCLELLAN, E. - - - - -	515
RICHARDSON, J. B. - - - -	256
THOMAS, J. P. - - - - -	401
VANCE, WILLIAM A. - - - -	8
VOORHIES, ALFRED - - - -	206
WATSON, H. J. - - - - -	201
WIBLE, B. M. - - - - -	105
WIENER, GEORGE - - - -	16

INDEX TO VOLUME XXII.

PAGE.

Abscess, spinal 143
Acid, sulphuric, aromatic, in necrosis 597
Action of butyl chloral 384
Address in surgery 331
obstetrics 348
Ambulance-bearers, a school for 597
American Medical Association 63, 197
A new anti-pruritic remedy 558
An interesting case 357
Anteversion of the fundus uteri, a bad case of 358
Antiseptic methods 281
A novel vinegar manufacturer 256
Artificial india-rubber 255
pupil 210
Asthma, two cases of 212
a secret remedy for 384
A very remarkable case, congenital elephantiasis 582

Barometer in coal mines 254
Boyle County (Ky.) Medical Society 361
British Medical Association, annual meetings 287
Bromoform as an anæsthetic 254

Cardiac hypertrophy 57
Cataract, extraction of 211
Central Kentucky Medical Association 237
Cerebral congestion 109
Chloroform in obstetrics, the use of 497
Cholera infantum 20, 249
Cholera, a note of warning from lessons in its past history. McClellan 515
Chromate of lead in ham-coverings 255
Cinchona trees in India 282
Circular crystals 80
Climatotherapy of consumption 434
Club-foot, phalangeal 101
Convulsions 105
Congenital cataract in a girl sixteen years old—recovery of sight 209
Contagious disease act 297
Consumption, a people without 488
climatotherapy of 434
CORRESPONDENCE—
Letter from New York 76, 462, 365
Portland, Maine 76
Mobile, Ala 107, 251
Berlin, Germany 170
Montpelier, Ind 250
Arcadia, Miss 585
Augusta county, Va 251
London, England 246
Lutherville, Md 583
Marshall, Texas 249
Chihuahua, Mexico 582

Diamond saw, a 469
Diastase 466
Diphtheria 451
Dislocations, true method of treating 1
Domes and steeples 486
Doctor of pharmacy 382
Drainage of Jerusalem 81

EDITORIALS—
Immorality at Oxford College, Eng 601
The American Medical Association 197

EDITORIALS— PAGE
The pollution of rivers 291
Boston diplomas 603
Medical Department of the University of Michigan 295
The present and past 296
The International Medical Congress of 1876 398
Pancreatomy 600
Training school for nurses 495
The close of volume xxii 603
Electricity in war 252
Epilepsy the result of chronic aural catarrh 208
Ergot 8, 201
Ergotin 467
a formula for 589
Ethics 285
Eucalyptus globulus in pulmonary gangrene 195
Exophthalmic goitre 401

Fibro-gelatinous polypus, otorrhœa, etc 207
Flat-roof as a place of recreation, etc 393

Galvano-caustic surgery 36
Gangrene, pulmonary, eucalyptus globulus in 195
Gastrotomy, a successful case 579
Grease-stains from clothing, compound for removing 597
Gynæcological Society, first annual meeting of 365

Hypodermic medication 327

International Medical Congress 458
Intussusceptio recti in pregnancy 577

Jaundice from atresia of the bile duct through cirrhosis of the head of the pancreas 596

Kentucky School of Medicine 92
Central Medical Association 237

Lafayette County (Miss.) Medical Society 462
Leucocytes 133
Lichen tropicus, treatment of 280
Lister's antiseptic method 246
Local anodyne, a convenient 181

Malpractice, action for 279
Mania-a-potu 490
Medical Society of London 92
Marshall County 243
Medical College convention 96, 195
of Virginia 391
Medical News 288, 396, 493
Medication, hypodermic 327

Naphtha for cleaning goods 471
Native Epsom salts 382
Nervous system, treatise on diseases of the 284
New adhesive plaster 470
New York Obstetrical Society 489

PAGE
Obstetric forceps, light..... 575
Obstetrical service of the Louisville City Hospital for 1875, analysis of..... 147
Obstetrical Society of New York..... 489
Obstetrical Society, Philadelphia, transactions of..... 492
Ointment for lycosis..... 171
Olive tree, the..... 472
Opium habit..... 41
Michigan..... 468
Ophthalmia in infants, purulent..... 224
Origin of scarlatina..... 595
Otorrhœa..... 207, 208
Ovariotomy, normal..... 393
double, for uterine fibroid and of left ovary for chronic oophoritis..... 562
Ozone..... 181
powder for producing..... 468

Pancreatin..... 466
Pelvic cellulitis, croton oil paint in..... 589
Phosphorus as a remedial agent..... 466
Photographing blood corpuscles..... 120
Photography as a detective..... 181
Picric acid for sore nipples..... 469
Poisoning from lead in vegetables..... 394
Pollution of rivers..... 279, 291
Power of steam..... 80, 195
Professional aphorisms..... 90
Pruritic remedy, a new anti..... 558
Ptyalin..... 466
Puerperal convulsions..... 430
fever, etiology of..... 395
causation and treatment..... 503
Pulmonary gangrene, eucalyptus globulus in..... 195
Philadelphia Obstetrical Society, transactions of..... 492

Quinia, bromo-hydrate of..... 467
solution of, for hypodermic use, 588
Quinetum..... 194

Removal of 121 ounces of pus from the left pleura of a child aged three years with satisfactory results..... 286
Rubber-ring tourniquet..... 423
REVIEWS—
Lectures on syphilis and of some forms of local disease affecting principally the organs of generation. By Henry Lee, M. D., etc..... 82
A treatise on diseases of the nervous system. By Wm. A. Hammond, M. D., etc..... 182

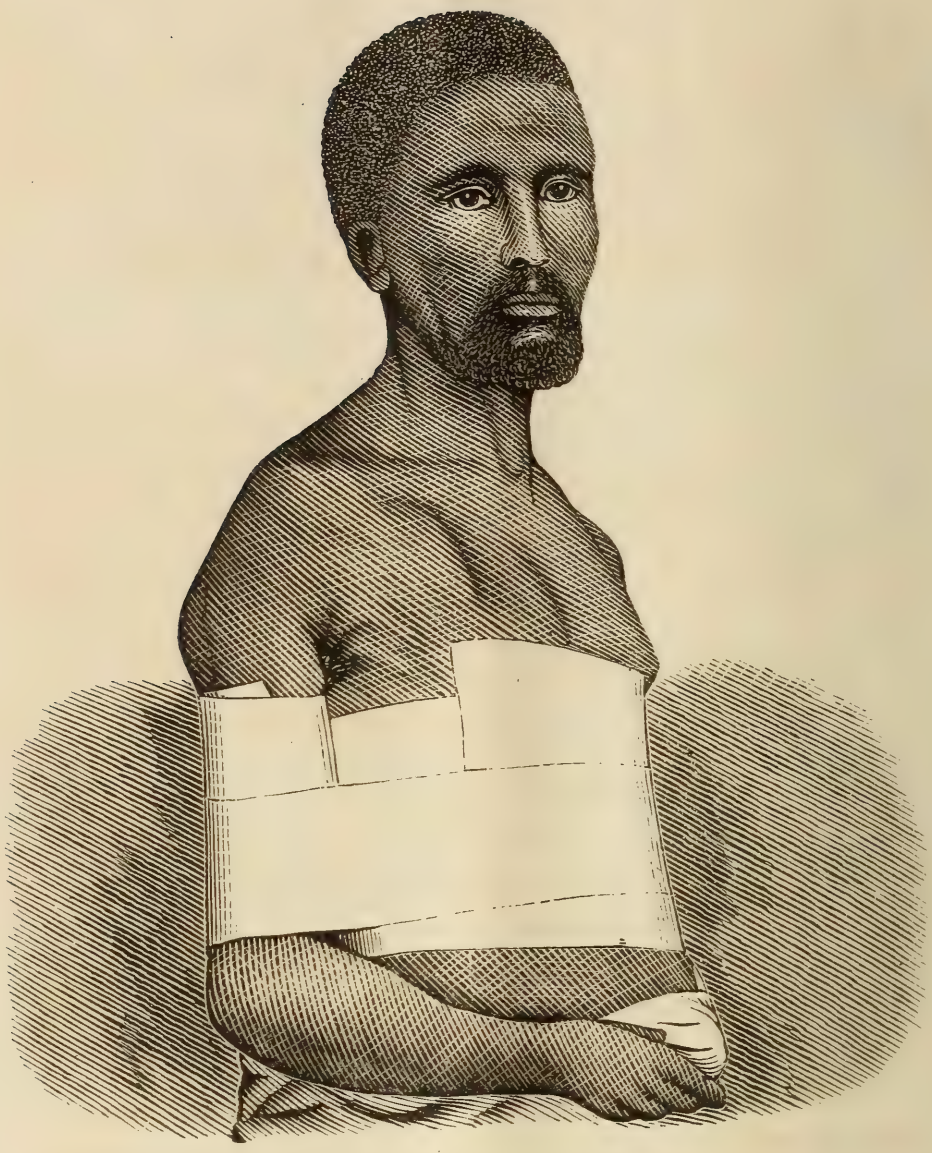
REVIEWS— PAGE
Orthopedic surgery and diseases of the joints. By Louis A. Sayre, M. D., etc..... 256
Lectures on fevers. By Wm. Stokes, M. D., etc..... 385
Transactions of the Kentucky State Medical Society, 1876..... 385
The medical and surgical history of the war of the rebellion. By Joseph K. Barnes, Surgeon-General U. S. A..... 472
Yellow fever and malarial diseases, embracing a history of the epidemics in Texas, etc. By Greenville Dowell, M. D..... 474
Statement of facts in regard to the controversy between the Faculty of the Atlanta Medical College and certain members of the Georgia Medical Association..... 483
Cyclopædia of the Practice of Medicine, vol. iv, Ziemssen..... 590

Sewer ventilation..... 392
Soap-root..... 470
SOCIETY MEETINGS—
American Medical Association..... 63
Society of Physicians and Surgeons of Chicago..... 149
Trigg County (Ky.) Medical Society... 155
Central Kentucky Medical Association..... 237, 564
Marshall County Medical Society..... 243
Boyle County (Ky.) Medical Society... 361
First annual meeting of the American Gynæcological Society..... 365
The International Medical Congress... 458
Lafayette County (Miss.) Medical Society..... 462
Colorado Medical Society..... 575
Spontaneous othœmatoma..... 16
Sponge divers, a panic among the..... 470
Stricture of the urethra, choice of operations for..... 219
Subacute aural catarrh..... 207
Syphilis, transmission of..... 213

The French not cosmopolitan..... 94
The Fisher case..... 282
To prevent damp north walls..... 471
Traumatic tetanus..... 359
Trigg County (Ky.) Medical Society..... 155
True method of treating dislocations... 1

Uric acid test..... 380
a new test for..... 590

Vaginal cyst, case of..... 488



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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—*The True Method of Treating Dislocations upwards and backwards of the Scapular end of the Clavicle, with a Report of a Case Illustrating the principle employed.* (With a wood-cut.) By WM. H. DOUGHTY, M. D., late Professor Materia Medica and Therapeutics in the Medical Department of the University of Georgia, Augusta, Ga. [Read before the Medical Association of Georgia at its Annual Session, held April 19th, 20th, and 21st, at Augusta, Ga.]

On or about the 26th of February, John, a colored man, presented himself at my office, complaining of an injury to his right shoulder. He states that while walking in the public stable where he is employed, he was tripped by a loose wire and thrown violently forward against an upright post, the shoulder receiving the unbroken shock. He found himself seriously disabled and in much pain.

On exposing the part, it was observed that the shoulder neither drooped nor fell forward, as in fractures of the clavicle, nor was the outline of the shoulder-joint proper altered in appearance as in dislocations at this point. A striking alteration in the line of ascent from the shoulder to the neck was noticed, caused by the contraction of the upper fibres of the trapezius; they were bellied out so as to produce a marked prominence and disfiguration. Upon examining the clavicle in its entire length, I was surprised to find a luxation upwards and back-

wards of the acromial end of this bone to a distance perhaps of one and a half inches. The flattened end of the clavicle looked forwards and upwards, so that besides being raised and drawn backward by the trapezius, it was somewhat twisted on its long axis.

With the assistance of Dr. J. S. Coleman, several attempts were made to reduce the luxation after the usual method of manipulation—*i. e.*, by direct pressure on the displaced end of the bone, and the upward and backward movement of the shoulder by bringing the arm forward and using the humerus as a lever, but I soon found that it was both difficult of reduction and seemingly impossible to maintain. While reflecting on the rational mode of adjustment, it occurred to me that the true method of antagonizing the fibres of the trapezius, which alone maintained the displacement, was to operate through the medium of the muscles that have their origin from the outer half of the clavicle and their insertion into the humerus. These, together with the subclavius muscle, arise from the inferior and anterior border of the clavicle, and when acting from their points of insertion, as fixed points, counterbalance the trapezius and clavicular portion of the sterno-cleido-mastoid. When the acromial end of the bone has free motion given it by a rupture of its ligaments, it is left the sport of the stronger of these antagonizing muscular forces.

Acting upon the above suggestion, the patient being seated in a firm chair, I grasped the arm just above the elbow and carried it backward, closely pressing it against the body and drawing it forcibly downward at the same time, and with the aid of slight pressure on the dislocated end of the clavicle, readily reduced and maintained it as long as the position of the arm was secured. It was often relaxed and as often reduced by this movement. It was then only necessary to maintain this position of the arm by a suitable apparatus to relieve the injury.

By a wide strip of adhesive plaster long enough to encircle the body and arm, this was done to the avoidance of all straps, bandages, pads, etc., about the shoulder or neck. The woodcut shows the position of the arm; the relative height and direc-

tion of the shoulder reflects the tense appearance of the fibres of the deltoid as they cross the point of the shoulder to the end of the clavicle, and shows the application of the adhesive band around the arm and body. As this arrangement involved no painful pressure or fatiguing restraint of the head, neck, or shoulder as in the usual effort to relax the trapezius and maintain the reposition of the bone, its success needed only the proper assiduity of the surgeon and the willing compliance of the subject. Thus, by this simple mechanism was beautifully illustrated that cardinal principle in the surgery of dislocations; namely, that their safe and proper reduction and treatment can best be secured by a careful study of the muscular action that maintains the displacement (a factor in its production also), and the relations of the muscles that normally antagonize it.

The result was all that could be desired; it is simply perfect; the arm and shoulder being at this date (April 15th) surprisingly useful and strong. It has been in gradual use for two weeks or more, so that within a period of four weeks the strength of the acromio-clavicular joint was firmly secured. The rotation of the scapular upon the clavicle seems to be as good as ever, and the integrity of the joint fully preserved.

Remarks.—The importance of a single case ought not to be disallowed or underrated when it is employed for the illustration of a new principle of treatment of injuries acknowledged to be unpromising by all known methods. A problem so purely physical as this one before us may, perhaps, be as clearly demonstrated by one as by many cases; numbers involve repetition, but do not of themselves give more than corroboration to the force of a single demonstration. When the most complete injury of the kind is furnished by such a case, the force of the demonstration acquires an authoritative expression little short of that which numbers, through experience, furnish.

In the case reported, the luxation was complete; the retention of the restored bone, in this class, in its articular position, is among the rarest results, and that, too, after the apparent exhaustion of the mechanical ingenuity of the most eminent surgeons.

It was displaced to a point one and a half inches upwards

and backwards, which involved the rupture of the coraco-clavicular ligament, as well as those forming the capsule of the joint (superior and inferior acromio-clavicular ligaments). Some idea may be had of the extreme difficulty in adjusting this dislocation by citing the experience of Dr. Hamilton, whose standard work on fractures and dislocations gives an authoritative judgment on all such cases. He had the perhaps unprecedented experience of forty-one cases of dislocations of the acromial end of the clavicle upwards, and he says, "it is impossible for me to say what has been the precise result in all the cases which I have seen, but my notes furnish only *two cases* of perfect retention after a complete dislocation at this point." (Page 566.)

Again, in referring to its treatment: "When the bone simply rises upon its socket, the reduction is always easily accomplished by pressing firmly upon its extremity with the fingers; but if, at the same time, it has been carried outwards, or outwards and backwards, the reduction is only accomplished by pulling the shoulders backwards, or by placing a pad in the axilla, using the arm as a lever, or by lifting the arm by the elbow, and at the same time pressing the clavicle down, and it will sometimes require the application of all or several of these procedures at the same moment. In some cases, the complete reduction has only been effected when the patient has been brought under the influence of an anæsthetic."

"As to the maintenance of the bone in its socket for a length of time sufficient to insure a firm union of the broken tissues, this will be found always more difficult, and in a great majority of cases absolutely impossible. Nearly all surgeons who have written upon this subject have made the same observation." (Page 567.)

Why the difficulty in the reduction and retention of the bone will appear from the quotation now to be made from this author, and I direct attention especially to it, because it reflects the erroneous principle which has guided the minds of surgeons in the effort to effect the object desired.

In discussing the merits of Dr. Falts' apparatus, he remarks that this writer "believed that he had found in Bartlett's ap-

paratus for broken clavicles, modified by the application of a shoulder strap, the infallible remedy for this one of the many sad defects of our art. The most important part of this dressing, according to Dr. Falts, is the compress placed upon the upper and outer end of the clavicle, and the bandage or strap passed over the compress and under the point of the elbow to maintain it in position.

"Dr. Falts is no doubt correct in regarding this strap as an important, if not the essential, part of the apparatus; and it is surprising that by Sir Astley Cooper, as well as by many other experienced surgeons, its value should have been overlooked. The chief obstacle to the retention of the bone in place is the powerful action of the trapezius, which constantly tends to elevate the outer end of the bone. In some measure this may be resisted by elevating very forcibly the shoulder or by inclining the head, but both of these positions are extremely fatiguing and will not long be endured. The bandage or strap, adjusted in the manner which Dr. Falts has recommended, is the only means of counteracting the action of the trapezius, upon which any substantial reliance can be placed; but the principle has long been understood and practiced upon."

"The practical difficulties are the sensibility and consequent inability sometimes of the point of the elbow to bear the requisite pressure, and the even greater sensibility of the skin over the top of the clavicle; the tendency of the bandage to slide off from the shoulder, and also to become displaced from the end of the elbow; the gradual relaxation of the bandages, which, when existing even in the most inconsiderable degree, is sufficient sometimes to allow the bone to slip out from its shallow socket; the impossibility of fixing the scapular, upon whose immobility, as well as upon the immobility of the clavicle, the retention depends; and finally, the great length of time requisite to unite firmly the ligaments, if, indeed, they ever again become actually united."

This lengthy extract contains the declaration of a principle to which all surgeons are committed. It is that the powerful action of the trapezius forms "the chief obstacle to the retention of the bone in place," to overcome which, *direct pressure* on the

latter by means of pads, compresses, and bandages suitably arranged, affords the only means "upon which any substantial reliance can be placed," this being characterized as "*the principle*" long understood and practiced upon. The elevation of the shoulder, inclining of the neck, and forward position of the arm, are merely auxiliaries to the main instrument or means; namely, *force applied to the displaced end of the bone.*

I venture to declare the latter an error, to which may be attributed the hapless results of the treatment. To expose one error involves sometimes as much good as the discovery of a new truth, and I trust it may not fail of this wholesome result in this instance.

To establish this, I lay down the proposition that, in complete dislocations of the scapular end of the clavicle, the only rational method of antagonizing the "powerful action of the trapezius" is by restoring the lost power and activity of those muscles—deltoid and pectoralis major—that normally do this. The mathematical resultant of this antagonism of forces is the reposition and maintenance of the bone, the common point of action or strife. Direct pressure becomes superfluous as a maintaining agency, since the harmony of the anatomical relations is secured by a reädjustment of the balance of the contending forces. A little reflection will satisfy the incredulous that any other position of the arm than that indicated in the annexed wood-cut will relax the deltoid and pectoral muscles, and thereby strengthen the overpowering force of the trapezius. The elevation of the shoulder, the forward position of the arm, the backward position of the shoulder (as by figure-of-8 bandage); indeed, every manœuvre heretofore employed to relax the grasp of the trapezius, except the inclination of the head towards the affected shoulder, aid rather in maintaining the displacement, in that they involve the relaxation of the muscles attached to the inferior and anterior side of the clavicle, except the subclavius. The onus of the effort by all such means is thrown, therefore, upon *direct pressure* upon the displaced end of the bone, which can not be endured for the necessary period of four or more weeks. Professor Hamilton realized this when he declared that the bandage or strap, with a compress, was the only

means "upon which any substantial reliance can be placed."

The true method of treatment then for this injury is to render and maintain a state of high tension of the fibres of the important muscles connecting the humerus and clavicle, making the former, for the time being, the fixed point of action. To do this, you must draw the arm forcibly downwards and backwards in close apposition with the body. Fortunately, it involves no painful restraint, no pads in the axilla, or other injurious means; simply a firm, wide strip of adhesive plaster, closely adjusted to the inequalities of the part. The side of the chest becomes a broad fulcrum to add the substantial leverage of the humerus to the direct traction already made, all of which contribute further to the immobility of the scapular, slightly rotated downward. Each element of the sustaining forces, now beautifully coöperative, contributes to the security of all and the certainty of the end. The theory is perfect, and the practice in the above case confirms it. I commit it to the judgment of the Profession, calmly awaiting the results of that enlarged experience which is so vital to the establishment of every clinical observation.

Mode of Application.—Provide a strip of adhesive plaster (spread on cotton-flannel) five or six inches wide, and long enough to encircle the body; then, having reduced the dislocation by the manipulation before described, invest the arm therewith from the insertion of the deltoid to near the elbow, carrying the strip backward and around the body, taking such direction on its front as the inequalities of the person may suggest. The arm thus pinioned can not be brought forward or elevated, but the security of its position requires the application of another strip of plaster over the whole, but not looped around the arm as in the first instance; the latter need not exceed three inches in width.

ART. II.—*Ergot.* By WM. A. VANCE, M. D., President of the Bristol Academy of Medicine (Tennessee). Published in this Journal at the request of that Society.

It is not designed in this paper to go into the natural history of ergot; nor is it intended to weigh its value as a therapeutic agent in the hands of the obstetrical practitioner. But it is to its uses past, present and prospective by the general practitioner that I would call your attention.

Educated physicians had been long familiar with its influence over the gravid uterus before they began to apply that wonderful force to the cure of diseases. For a long time it was, by the common consent of the profession, supposed to possess none but its oxytocic virtue. If there is in our list of remedies an article entitled to the name *specific*, to this one, in its action on the uterus, that measure of praise is eminently due. Those ancient dames who had been the rivals of our professional forefathers in fields where obstetrical honors were won, bequeathed to them the mütter korn. And for generations they appeared to have no higher aspirations than to be arrayed in the hood and mantle of their benefactors. The spirit of adventure came, and it was but an easy and natural transition from the well-known power of secale coruntum over the parturient function to suppose that it also had controlling influence over the unimpregnated womb. Hence it was suggested as a remedy for menorrhagia and every known form of hæmorrhage from the uterine cavity. Nor were these anticipations disappointed. From that day to this, the united voice of the profession has placed it in the front rank of medicines for the cure of all these ailments.

Marshall Hall and other physicians, both in England and on the continent of Europe, treated uterine leucorrhœa with it, with encouraging success, about the year 1830.

Dewees proposed ergot as a means to expel hydatids from the uterus; and Dr. McGill, of Maryland, was the first to put the method into successful operation. Dewees also suggested first that ergot might be advantageously used in the treatment of polypi of the womb. Dr. Davis, in 1825, was the first to carry out this recommendation. Since then the same practice has

been many times pursued with good results, both in this country and in Europe.

Cases had been reported establishing its power to cure gonorrhœa in the chronic form; of spermatorrhœa, gleet, and incontinence of urine some cures had also been reported. In paraplegia it had been administered with success by Barbier, of France, in 1831. He ascribes the sensible effects of the medicine to an action on the spinal cord. Stillé, in his work on therapeutics, says: "And doubtless such is the most probable explanation of its influence in this case, as well as in parturition."

We come now to an epoch in the history of ergot. Hitherto all had been darkness, doubt and uncertainty as to its *modus operandi.* Its power over the gravid womb had been wondered at both by the skilled physician and the empiric; both had ventured with its use into unexplored fields of practice. Indeed, all had been empirics alike. The most learned in the profession were as incapable of explaining its operations as the untutored peasantry of France and Germany, to whom its use first became familiar.

Pereira, whose great work on Materia Medica and Therapeutics is one of the classics of British Medicine, in speaking of the influence of ergot over hæmorrhages in general, says: "The power possessed by this drug of exciting uterine contractions readily explains its efficacy in restraining sanguineous discharges from the womb; but we can in no way understand how hæmorrhages from other organs can be influenced by it."

Stillé, as we have just seen, endorses what Barbier, of France, has said in attributing the properties of ergot in healing diseases to a direct action on the spinal cord.

To Doctor Brown Séquard is due the merit of throwing open to the profession the secret of the power of ergot over the gravid uterus and in healing disease. He was the first to demonstrate that this drug has a direct power to cause contraction of the unstriped muscular fibre of the arteries and limit the afflux of blood to the parts specifically acted on. This fact was made known about the beginning of the last decade. Experiments made a short time after, by Prof. Hammond, as he tells

us in his work on Diseases of the Nervous System, fully confirmed those made by Brown-Séquard. Now, if ergot has the power to act directly on the unstriped muscular fibres of the arteries in such a way as to cause their contraction and limit the supply of blood in the parts acted on, why may it not act in a like way on all the unstriped muscular fibres wherever they are found? Opium, we know, will act specifically on the nerves in the region of the knee-joint to relieve the rheumatic pain *there*. But is the action of opium confined to the nerves of that joint? Do we not know that the peculiar effect of that drug is to allay pain, and that its influence is coëxtensive with the nervous system? Now, if Doctor Brown-Séquard has demonstrated that ergot has power to cause the contraction of the unstriped muscular fibres of the arteries—and, if we have long known its tremendous power in contracting the enormously developed unstriped muscular fibres of the gravid uterus—may we not, by parity of reasoning, legitimately infer that its peculiar function is to cause contraction of that class of muscular fibres in all parts of the body?

The practical experience of the profession in the present day is rapidly accumulating facts that go to verify this conclusion. And in it we see the explanation of the power of ergot in the past; of its brilliant results in the practice of the present day; and are led to hope for a wider field of usefulness and more satisfactory effects in the future.

To what extent is the unstriped muscle found in the human body? Gray, in his Anatomy, tells us: "It is found in the walls of the hollow viscera, viz., the lower half of the œsophagus, and the whole of the remainder of the gastro-intestinal tube; in the trachea and the bronchi; in the gall-bladder and the ductus communis choledochus; in the pelvis and calices of the kidneys; the uterus, bladder and urethra; in the female sexual organs, viz., the fallopian tubes, the uterus, the vagina, and the broad ligaments; the erectile tissue of the clitoris; in the male sexual organs, viz., the dartos scroti, the vas deferens and the epididymis; the vesiculæ seminales, the prostate gland and the corpora cavernosa; in the ducts of certain glands, as in Wharton's duct; in the capsule and trabeculæ of the spleen;

in the arteries; in the veins; in the lymphatics; in the iris, and in the skin."

When we survey the vastness of the field that lies open to the influence of ergot as a medicinal agent, and the great extent of that field that is yet an unexplored region, who can yet set limits to its usefulness in the hands of the skillful physician? Who can yet tell the good results it is capable of achieving by its own unaided powers? Or, who can yet say to what extent it can be made useful in conjunction with other auxiliary remedies?

The question naturally arises, through what channel is the power of ergot conveyed to the parts upon which it is spent? Evidently through the system of sympathetic nerves. For all the parts named by Gray, in which the unstriped muscular fibre is found, are the same to which that system of nerves are distributed, and to which we can, with few exceptions, trace no direct extension of the cerebro-spinal.

Brown-Séquard's great discovery suggests to my mind an interesting idea, which, I think, the periodical medical literature of the day is presenting much evidence to prove an established fact in therapeutics. It is this: That we have in ergot an excitant of the sympathetic system of nerves, as we have in nux vomica a medicine bearing the same relation to the cerebro-spinal. I will not suffer a spirit of enthusiasm to lead me away in pursuit of a false light. But I do think, in truth, we have here a true light dawning upon us. Dalton, in his work on Physiology, tells us: "The great sympathetic is endowed with *sensibility* and the power of *exciting motion*. And that its branches follow the arteries to their remotest ramifications." He, moreover, says: "The most important fact concerning the sympathetic, is that of its influence over the vascularity and nutrition of the parts supplied by it." The division of the sympathetic produces immediately a vascular congestion of the corresponding parts. If the sympathetic be divided in the middle of the neck of a rabbit, a vascular congestion of all the parts of the head on the corresponding side immediately follows. This congestion is most distinctly evident in the transparent ears; and within a few minutes after the operation the difference in the

appearance of the two sides is strongly pronounced. All the vessels of the ear of the affected side become turgid with blood; and many which were before imperceptible become distinctly visible. Increased heat, greater redness and swelling ensue. These appearances all finally vanish on the reünion of the divided nerve filaments. And if the portion of the divided nerve which remains in connection with the tissues be irritated with electricity, all the above effects rapidly disappear; the blood vessels of the ear and corresponding side of the head contract to their previous diameter; the quantity of blood circulating through the tissues is diminished; the temperature of the parts is reduced in a corresponding degree; and the blood in the veins returns to its ordinary dark appearance. Now, Dr. Hammond, in his work before alluded to, says: "The action of ergot is to lessen the diameter of the blood vessels by its constringing power over the organic (unstriped) muscular fibre entering into the composition of their walls. "I have," he continues, "ascertained by actual experiment that ergot does exert the influence in question." Having prepared an aqueous infusion of this substance, he placed it on the web of a frog's foot, under a microscope. In a few moments contraction of the capillaries ensued, and they became so small as not to allow the passage of the blood corpuscles. This experiment he repeated several times, and he was perfectly satisfied that the result was as stated. He also frequently injected small quantities of the infusion into the stomach of frogs, and contraction of the capillaries of the web always followed. These experiments confirm those made a short time previous by Dr. Brown-Séquard.

Now, when we consider that Gray, in his Anatomy, tells us the unstriped muscular fibre is found in every part of the body where the functions of organic life are manifested—that Brown-Séquard and Hammond have demonstrated the special power of ergot in causing the contraction of that muscular fibre—that Dalton has taught us the great sympathetic is endowed with *sensibility* and the *power* of *exciting motion*, and that its branches are distributed, almost exclusively, to the unstriped muscle—when all these truths are duely considered, it is not a sophism, I think, to conclude that the special mission of ergot is to act

as an *excitor* of the great sympathetic, and through it to cause, as Brown-Séquard and Hammond have shown, contraction of the unstriped muscular fibre.

Armed with an instrument endowed with such a power, the physician of skill may accomplish brilliant results by its unaided operation; and by a judicious combination with other remedies the field of its usefulness may be widened. Look at the very large percentage of human ills depending on inflammation. By the constringing power of ergot over the arteries, capillaries, veins and lymphatics, what means have we here to aid in terminating inflammation by resolution? It slows the pulse, limits the afflux of blood, diminishes the calibre of the capillaries, increases the onward flow of the contents of the veins and lymphatics, and by a timely combination with a medicine to reduce the plasticity of the blood, nearly every indication in the treatment of inflammation would be fulfilled. Its influence can be exerted with telling effect in removing congestion, hyperæmia and hypertrophy of the glandular organs. Hæmorrhages and other fluxes from all the mucous membranes can be successfully treated with it. In paralysis, convulsions and insanity, we see instances of its wonderful effects in diseases of the nervous system. I have seen some lingering and tedious cases of cerebro-spinal meningitis that defied all treatment, which, if I were to meet with their like again, I would gladly put under the power of ergot. Some cutaneous affections, especially erysipelas, I think, might be successfully treated with this drug. Enlargement of the spleen, I have an idea, would be the very thing in which ergot would accomplish great good, especially if combined with some medicine to correct the cachectic condition so often accompanying that disease. The same might be said of similar affections of the liver.

The reader of the medical literature of the present day can not have failed to notice the increasing frequency with which ergot is reported as a therapeutic agent. More than forty years ago I read in my preceptor's office Eberle's Therapeutics. It was a standard work in that day in this country. In a fit of antiquarian research I have recently referred to the article on ergot in its pages. But, although that drug had been known

in practice for a century previous, I find it but once mentioned as a therapeutic agent outside of the obstetrician's field of duty. From that day to Brown-Séquard's discovery the use of ergot, in general practice, increased quite slowly. Since then it has been growing more rapidly in favor wherever medicine is cultivated as a science. That eminent physiologist, by the discovery of a simple truth, has awakened a lively interest in and given increased importance to a hitherto unpretending drug.

If the Academy will indulge me, I will in a cursory manner, ignoring order and classification, refer to some of the diseases in which ergot has been recently tested as a power to heal. Hammond tells us that in congestions of the spinal cord that have come on suddenly, and are therefore acute in their character, ergot may be given with advantage from the inception of the disease; but in the more chronic cases it is *indispensable.* He continues, "I have given it in a large number of cases of diseases of the spinal cord, congestions among them, in which it was necessary to diminish the amount of blood in the spinal vessels, and I am satisfied that such is its effect; but I never obtained its full influence till, in accordance with the suggestion of Dr. A. Jacobi, I adopted the practice of giving it in very large doses. Among the first cases treated thus, was a patient with acute congestion of the spinal marrow, unable to walk. He recovered in one month under the use of teaspoonful doses of fluid extract of ergot—no other remedy used."

Aitkin, in his Science and Practice of Medicine, speaking of the treatment of paraplegia, says: "Of internal remedies, the best are such as diminish the amount of blood in the spinal cord. For this purpose ergot is superior to anything."

To prove that this drug can exercise the same influence over the brain that it does over the spinal cord, I will relate an interesting statement to that effect from Dr. J. Crichton Brown, of West Riding (England) Lunatic Asylum. He says that Brown-Séquard's assertion of the powers of ergot has induced him to try its effect in cases of insanity for six years. It had acted so favorably that he felt a conviction that the controlling power over the diameter of the blood vessels imputed to it was as stated. He was surprised that a medicine so long known

should not have been resorted to at a much earlier period. In recurrent mania, chronic mania, and epileptic mania, he says it is eminently useful, and almost uniformly efficacious. In asylum practice, he says it is an invaluable instrument, controlling conditions hitherto regarded as highly intractable; from the dangers of which nothing can so well deliver the patient as this inestimable boon.

Doctor Van Andel, in Germany, has reported the good achieved by ergot in cases of acute mania with raised temperature, flushed face, red eyes, throbbing carotids and contracted pupils. He says the usual effects are diminished excitement, gradual cessation of raving, crying and storming; the patient growing more manageable and often refreshing sleep following.

M. Hayem ("Dublin Jour. Med. Sci.") has been making a trial of ergot in cases of enteric fever, with the object of lowering the temperature. The results he has obtained have been very satisfactory, and its employment in this disease seems to him preferable to that of sulphate of quinia or of digitalis. Under the influence of ergot there is a much more rapid defervescence; and at the period of the acme, instead of there being a rise in the temperature chart, a plateau is obtained. In some cases in which the ergot was given only during the day, the evening temperature was not so high as the morning. The dose varied from thirty to fifty grains in the twenty-four hours.

Doctor DaCosta has reported a case of diabetes insipidus treated with ergot. It had defied all other remedies; but as soon as the patient was put under ergot-treatment he began to grow better, and continued to improve until the cure was complete and confirmed. He says when the patient was discharged he was as strong and as well as he ever was, and had gained forty pounds in weight; and it was difficult to recognize in the fat, bright-eyed, jovial man who left the hospital, the lean, languid-looking, dejected patient who had come to it a few months before apparently to die.

Of the many uses to which ergot has been put, there is none in which its effects are more strikingly shown than in arresting hæmorrhages from the lungs. A great many cases have been reported; and generally its action is promptly curative, especially when administered hypodermically. A few weeks ago I

was called in the night to the bed-side of an aged lady who was spitting blood freely, having lost perhaps a pint in less than an hour. The hæmorrhage was immediately arrested by the administration of ergot, and has not since then returned.

Langenbeck has experimented to a considerable extent in the treatment of aneurism with ergot. From the known properties of this drug, this idea would be readily suggested. He reports encouraging success. In aneurisms unattended with calcareous or other morbid degeneration of the coats of the vessels, it is probable good results would follow its use, otherwise, there would be no reason to hope for benefit. In internal aneurisms it might, in some cases, be used with great advantage.

The same eminent surgeon has used the medicine with success in the treatment of hæmorrhoids and prolapsus ani. In that other great prolapsus (uteri) might it not be used with great advantage, especially in cases depending on congestion or inflammatory engorgement of that organ and a lack of tone in the vagina?

With regard to uterine fibroids, a great deal of hope has been indulged, and much disappointment met with in their treatment with ergot. The profession is much divided on the subject. But that good results have somtimes been obtained there can be no doubt. Hildebrandt and some others on the continent of Europe will persist in believing that absorption is promoted and sometimes accomplished, while Barnes and some others, in Great Britain, are hopeless of such results. All agree that expulsion is sometimes effected. When the tumor is submucous, it is sometimes under the influence of ergot converted into a polypus, and we are thus aided in getting rid of it.

ART. III.—*Two Cases of Spontaneous Othæmatoma Treated by Means of the Seton and Ending in Perfect Recovery.* By GEORGE WIENER, M. D., Assistant Surgeon to the Maryland Eye and Ear Institute, Baltimore, Md. GEORGE REULING, M. D., Surgeon in Charge.

This very rare affection is characterized by a more or less developed cyst caused by sanguineous effusion between the fibro-cartilage of the ear and the folds of the integument. Gudden

makes the disease consequent upon trauma of some kind, occurring in the great percentage of cases in the insane. Ludwig Mayer, however, and Virchow, in his work on Morbid Growths ("Krankhafte Geschwülste"), have remarked the fact, that after even very serious external impressions no such cysts develop; and, conversely, after but slight excitation, as, for instance, pulling at the lobule, a perfect othæmatoma—or hæmatoma auris, as Dr. Stiff prefers to call it—may be formed. As a matter of peculiar interest, so far at least as the cases under consideration are concerned, it may be mentioned that Th. Simon, Physician in charge of the Insane Asylum at Fredericksburg, near Hamburg, states in a paper published in the "Berliner Klinische Wochenschrift," p. 466, 1865, that all the instances of othæmatoma which ever came under his observation were preceded by some morbid growth. In the cases herewith submitted, nothing of the kind was noticed. I am, however, of the opinion that an othæmatoma can never arise unless some morbid change had previously taken place in the cartilage and the vascular tissues. The affection, therefore, is the result either of direct injury, traumatic othæmatoma, or it originates from some disease of the structures upon which it makes its appearance—spontaneous othæmatoma.

According to Gruber, traumatic othæmatoma always results, when it occurs in a previously healthy ear, in consequence of breakage of the cartilage and laceration of the blood vessels.

Spontaneous othæmatoma is commonly introduced by softening processes (Virchow); enchondromatous degeneration (L. Mayer) and an atheromatous state of the blood vessels, disposing to great friability, so that the slightest cause may bring about extravasation of blood into the tissues of the pinna; cachectic and spanæmic individuals, other things being equal, being most liable to be attacked by the disease.

The affection originates most usually in the fossa triangularis as a circumscribed, fluctuating tumor, varying in color from an intense to a pale red. The external surface is smooth if the blood has been extravasated into the subcellular tissue; if the discharge is met with in the substance of the cartilage, however, or between the cartilage and the perichondrium, the

depressions and elevations of the auricle may be distinctly felt.

As regards subjective symptoms, they are, as a rule, of but little moment; more or less heat and a feeling of tension being most commonly the only annoyances. The sense of hearing suffers only when the tumor, as it did in case No. II., closes the lumen of the external meatus.

If left to itself, the disease may terminate in atrophic degeneration; or, if the extravasated blood undergoes putrescence, it may end in fatal septicæmia. According to Gruber, however, *spontaneous* othæmatoma is never capable of producing so disastrous an effect; the most common sequencé being great deformity of the external ear.

The next question which arises is, how are we to treat so peculiar a disease? Very few surgeons have had an opportunity of seeing it, on account of its exceeding rarity, and their mode of treatment has been more or less empirical. Mayer, Gruber, Thurman, Speed, Ammon, and Ottensosser saw a comparatively large number in their practice among the insane, and came to the conclusion that the most desirable mode of treatment consists in exciting adhesive inflammation. The manner by which they accomplish this varies greatly. Gruber introduces the trocar, so long as the blood is not coägulated; in the latter case, he makes a free incision with a thumb-lancet and then removes the coägula. He then fills up the cavity with pledgets of lint and applies the pressure bandage. Ottensosser makes use of antiphlogistics and aqua goulardii. Mayer incises, letting out the effusion, and then paints with iodine.

I will now describe the two very rare cases of this disease which have come under my observation, and detail the mode of treatment employed, with excellent results in both.

Case I.—Frank P., an Italian, barber by trade, twenty-two years of age, came to the Infirmary in December of last year. A fluctuating tumor of the size of an English walnut, emanating from the fossa triangularis and covering all that portion of the auricle above the concha, was observed on the left ear of the patient. It may be remarked, *en passant*, that the *left* ear seems to be the *lieu d'election* of this peculiar disease. The patient, who was an otherwise perfectly healthy man, experi-

enced no actual pain. He complained of nothing but an uncomfortable feeling of tension. He had received no blow near or upon the ear, nor had he noticed any preceding growth or swelling. To use his own words: "It seemed to have come over night."

The sanguineo-purulent contents were let out, an incision having been made into the tumor; a seton was then passed through the cyst. The next day the tumor had returned to its original size, being filled with a serous fluid. The position of the seton was now slightly changed, in order to produce adhesive inflammation and allow the contents to gradually ooze out. This was continued until the eighth day, when it was removed. The walls of the cyst had united nicely, the tumor having entirely disappeared, the elevations and depressions (helix, fossæ, antihelix, etc.,) not being in the least affected; the entire pinna being, in a word, of healthy shape and appearance. Discharged cured.

Stat. præs.—The patient is entirely recovered, no vestige of the disease remaining, except that the cartilage is somewhat stiffer to the touch than is normally the case.

CASE II.—This case is remarkable, not alone for being a spontaneous othæmatoma, but also because it happened in a child (girl) two years of age. As far as my reading goes, I believe that this affection has never before been observed in so young a subject.

The child, Julia K., of no scrofulous diathesis, was first seen in February, 1876. A well-developed othæmatoma was observed covering the upper part of the auricle; it had proceeded from the concha, closing up to some extent the lumen of the meatus externus, interfering thus to a great degree with the power of hearing.

According to the mother, it was gradual in its growth, having commenced as a tumor of the size of a pea. No attention was paid to it until after the lapse of a couple of days; it had arrived at its then condition. There was slight constitutional disturbance, the child was feverish and very fretful. The tumor was of a deeply red color, hot and fluctuating to the touch. A seton, the silk having been slightly moistened with

tincture of iodine, was introduced through the longitudinal diameter of the cyst, the contents being pressed out as the needle was being passed through. A pressure bandage was then applied. Adhesive inflammation set in. After the lapse of five days the seton was taken out, no trace of the tumor remaining, with the exception of slight redness of the fossa scaphoidea. The bandage was now removed, scrupulous cleanliness observed, and at the end of the week all signs of the disease had disappeared.

Stat. præs.—The child is perfectly well, and of an intelligence far beyond her years. Her ear is entirely normal in appearance, and there is no likelihood of the tumor ever returning.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—*Cholera Infantum.* By OTIS FREDERIC MANSON, M. D., Professor of Physiology and Pathology. [A Lecture* Delivered to the Summer Class of the Medical College of Virginia.]

Gentlemen,—We have passed in review the various forms of disease ascribed to the morbific agency of malaria, from the simplest cases of intermittent neuralgia, through the periodical neuroses, up to the gravest forms of fever, inflammation, and hæmorrhage. We have called your attention to the fact, that many of these varieties of disease were universally admitted to arise solely from the deleterious influence of malaria, whilst some of them were considered to be composite forms of disease, arising from other causes, acting in conjunction with the malarial intoxication.

Whilst admitting that the number and complexity of the morbid manifestations, arising wholly or in part from the same or mingled causes, are liable to confuse and bewilder you at the

* This was one of a series of lectures on the General Pathology and Therapeutics of Malarial Diseases.

outset of your studies, yet, as physicians of the future, it will be indispensably necessary that you should become intimately acquainted with each of these varieties of disease, and should acquire such a perfect familiarity with their features as to be enabled to recognize them readily at the bedside.

It would seem that the catalogues of affections attributed to the action of malaria was already sufficiently extended without any new additions being made to it; yet, I should consider one of the most important duties I owe to you and humanity was neglected if I did not, on the present occasion, endeavor to add another to the long list already mentioned. I therefore invite your attention this morning to a disease which, in my judgment, ought to be classed among the *pernicious malarial fevers* of authors—a malady which, from its frequent occurrence and great fatality, as well as from the innocent and helpless character of its victims, possesses a peculiar and absorbing interest to the American practitioner and the American people. The disease to which I allude is that usually termed cholera infantum.

Permit me to premise, that although the views I shall now lay before you have been long entertained and acted upon by me, yet I have felt it my duty to weigh well everything connected with the subject before giving it publicity. I feel the liveliest sense of the heavy responsibility incurred in advocating a new pathology, and more especially a new line of treatment, in such a grave and extensively prevalent malady; and you may, therefore, receive what I shall have to say now, not as the offspring of a passing fancy or immature judgment, but as the result of frequent and prolonged observation, and I trust I may be allowed to say of as deep and conscientious reflection as I am capable of bestowing.

It would be impossible in the brief space of time allotted to me in the summer course of lectures to treat this subject *in extenso;* indeed, I should be wandering from my sphere, and be trespassing upon the domain of special pathology were I to do so; yet, as it is obviously necessary in discussing the general pathology of an important class of diseases that the conspicuous features should be developed, that the main facts should be men-

tioned from which the general induction is to be drawn, I shall, therefore, as concisely as possible, call your attention to the leading points connected with the *history*, *symptomatology*, *etiology*, and *therapeutics* of the disease.

History.—It is a source of deep regret that the literature of such an important disease should be so meagre. I have been unable to obtain any satisfactory information concerning it from any European source. If it exists among these authorities, it has eluded a very careful and earnest research. So little, indeed, have I found in European works on the subject of diseases bearing a remote resemblance to cholera infantum, that I have been led to doubt the existence of the malady in any of these countries. If it appears there at all, it must occur sporadically, and not, as in this country, as an annual devastating epidemic disease. If a disease so frequent in its occurrence, so widespread in its prevalence and fatal in its consequences, were found in or about the great capitals of Europe—the centres of medical learning and the fecund source of authors—we should, ere this, have had numerous and extensive treatises upon the subject. On the other hand, we have a few good descriptions of the phenomena and anatomy of the disease from American writers, by whom it is generally regarded as essentially an American disease.

Let us now glance at the principal circumstances connected with the phenomena, appearance and prevalence of this malady. And *first*, as we have said, it is an *epidemic* disease prevailing among the new-born and nursing infants of immense regions of country, and usually occurring annually. It is not, strictly speaking, an *endemic* disease. It is not confined to any *circumscribed* locality or definite section of country. It is not at all peculiar to cities; but, on the contrary, prevails epidemically among the children of the rural populations, and often there assuming its most malignant form. It prevails in country regions among the wealthiest as well as the poorest inhabitants, and in the most sparsely settled districts, where there is no overcrowding, no sources of domestic filth or animal infection, and where such diseases as are supposed to arise from great density of population are unknown. On the other hand, many

sections of country are entirely free from its ravages, and in which it is only known by report. These are usually elevated or mountainous regions, distant from uncontrollable water-courses and overflowed lands and marshes. In the densely populous cities of the Old World, where drainage has been comparatively perfected, and where every inch of soil, within and around them, has either been covered by a building or is under constant cultivation, this disease, as far as we can ascertain, is unknown. In regard to the extensive prevalence of this disease in the country districts, I will state that the assertions here made are based upon my own observation, having been a country practitioner for twenty-one years of my life, and from conversations and correspondence with many country physicians engaged in extensive practice, whose experience entirely coïncides with my own. That this disease does not prevail in the great cities of Europe is proven by the fact that their writers do not mention it or describe any disease that corresponds with its symptoms.*

As its name implies, this is a disease of infancy. It may attack babes at any period between birth and two years of age, and in rare cases even older children have been affected. According to my experience, infants between five and nineteen months old are most liable to its assaults. It may, however, assail infants a few days after birth, or it may defer its first invasion until the child arrives at the age of two and three years.

Fatality.—This is a disease of frightful mortality. We have been, however, so accustomed to its annual ravages that the death of a hundred infants from this disease only excites a passing remark. "So use doth breed a habit in a man." Were as many to die of an imported disease, such as Asiatic cholera or yellow fever, it would excite general consternation, and lead to the most expeditious emigration.

* In treating of the severer forms of diarrhœa in which "death takes place in a few hours," Dr. West, the distinguished London writer, says that he has "never seen an instance of it himself," but that this rapidly fatal termination is far from unusual in the Southern States of America, where diarrhœa, under the various names of cholera infantum, the summer complaint, or gastro-follicular enteritis, destroys annually many thousands of children.—*Diseases of Infancy and Childhood*, 2d Amer. ed., p. 389.

Symptoms.—So prevalent among us, gentlemen, is cholera infantum, that the *symptoms* are doubtless familiar to most of you. We must, however, relate them succinctly, in order that our remarks upon its pathology and treatment may be properly understood.

The mode of invasion varies in different cases. Premonitory symptoms, such as irritability of temper, disturbed sleep, feverishness, and diarrhœa, are often observed for a week or more before the disease assumes its characteristic gravity. This is announced by frequent vomiting, increase of fever, inextinguishable thirst, restlessness, sudden failure of strength, and rapid emaciation.

As far as the symptoms referable to the stomach and bowels are concerned, there is remarkable similarity between this disease and Asiatic cholera, so much so, indeed, that in the present state of our knowledge, if we were to confine our observations to the gastro-enteric symptoms, we should often be unable to discriminate between it and the Oriental disease. As the latter is, however, of rare, whilst the disease under consideration is of annual occurrence, we shall only be troubled in our diagnosis when the imported diseases is epidemic, and when under the influence of the more potent epidemic cause, the cases of the domestic disease become merged, and even indistinguishably intermingled with the foreign scourge. The diagnosis, therefore, is usually simple and easy, as it resembles no other disease, except it may be some cases of poisoning by known toxicological agents. Even here, the history of the case, the character of the epidemic, and the ulterior course of the disease, will usually enable the intelligent practitioner to diagnose correctly.

But there are other symptoms of equal, and I may say of more, importance in this disease than those referable to the stomach and bowels. We have present along with these symptoms, *fever*, the great foe of the human race. Although in many cases this fever is slight at the commencement, and only to be ascertained by the thermometer, yet a careful examination with the instrument will generally detect an increase of heat above the normal temperature at the onset, whilst later it is

plainly apparent to the most unpracticed touch. I again urge upon you, as I have in my observations upon clinical thermometry, the importance of using this instrument in every serious disease. This fever of which we speak has its peculiarities. In the first place, it is obviously remittent in the great majority of cases, and in some it is clearly intermittent in its type. In others, however, it is continuous in its course, just as it is frequently observed in ordinary malarial fever in the adult, and which the old writers, to distinguish from typhus and typhoid fever, termed *subcontinued.* The heat measured by the thermometer, however, will usually show *remissions* or *intermissions* and exacerbations of the fever in every twenty-four hours; the remissions and intermissions usually occurring between midnight and 11 o'clock of the following morning, whilst the exacerbations, though commencing commonly in the afternoon, may postpone their appearance until the early hours of the night. There is another trait in this fever that is eminently deserving your attention—its external manifestations are often very partial. As a rule, the head is the warmest, and next the trunk, whilst the extremities may be even pleasant, or cool, or even cold. Unequal distribution of heat, as measured by the thermometer, and very sensible to the touch, is a frequent phenomenon in this affection, and especially in the grave cases; indeed, it is a grave symptom in any disease. The temperature may rise in the exacerbations to 108° Fahrenheit, whilst the surface of the extremities is below the normal temperature, and then may even descend to 95°, as in the algid cases of Asiatic cholera.

With the fever, we have its usual attendants, when occurring in children. The child, when not vomiting or purging, is usually drowsy, and in severer cases is delirious or comatose. The pulse is quick, frequent, contracted, and compressible, and never full or hard. Along with these symptoms of fever, there is insatiable thirst, restlessness, fretfulness, and agitation. Usually there are symptoms of undue excitement or oppression of the brain present, even in the early stages. At first, the matters ejected from the stomach by vomiting are those taken as food, these are succeeded by ejections of the gastric secretions, *color-*

less or tinged with bile of a yellowish or greenish hue. The intestinal evacuations are varied. As a rule, they are deficient in any of the hues derived from the bile pigments. They are usually fluid, of a dull-brown or yellow-ochreish hue, or of some of the hues of blue and green, or colorless like rice water. Although yellow and green, as we have said, the true healthy bile pigments are wanting, and you will gradually learn to distinguish the peculiar bright clear tints of brown, yellow, and green, due to the presence of bile from other evacuations. It is a remarkable fact, to which I wish to call your attention, that in cholera infantum, as in the ordinary intermittent and remittent fevers of adult life, however copious and frequent *bilious vomiting* may occur, yet there is no evidence of the presence of the smallest quantity of bile in the intestinal dejections until the febrile action disappears. The reäppearance of bile in the evacuations of a blackish-green color in protracted cases, and of a lighter green or bright-yellow color in milder cases of shorter duration, is the usual harbinger of convalescence. No case can be considered cured until the liver resumes the regular and healthy exercise of its functions. Often the first symptom of relapse is the return of colorless or slightly colored stools, untinged by the bile pigments, having an offensive odor, and being deficient in consistence. Rapid and excessive emaciation is a characteristic symptom of this disease. The skin becomes pale at the commencement, with a bluish tinge around the mouth and eyes—the latter sink in their orbits, and give to the countenance the physiognomy of exhaustion. The patient may be said to shrink owing to the excessive watery evacuations from the stomach and bowels. We have told you in our physiological lectures that water constitutes by weight, according to the best authorities, from two-thirds to three-fourths of our bodies. We may, therefore, say that the human body in cholera infantum *shrinks* as evidently as a wet cloth under the wringing hands of the laundress. The emaciation occurs too rapidly to be attributed to the absorption of fat or the other solid tissues. This occurs later in the disease. That the rapid emaciation is produced by the fluid evacuations is also proven by the quick reässumption of plumpness and *embonpoint* in a few days,

where the case has been properly treated, or when the disease spontaneously and rapidly subsides. As the disease advances, however, in slow cases, as in other febrile diseases, wasting of the solids of the body ensues. The adipose tissue which gives to infancy its charming, rounded forms, and in which the lines of beauty are seen undulating over every limb and feature, now becomes rapidly absorbed. The skin falls down and contracts over the bones of the face, and where the fat is predominant, so rapid is its absorption that the integuments, not having time to contract, as on the limbs, hang loosely from them in folds. The eyes, which sank suddenly in their orbits at the commencement of the disease, sink still deeper in their cavities, the features become sharpened, the cheeks become excavated, the mouth becomes more prominent, and the lips thin and wrinkled.

As the disease advances, the abdomen, which in the early stages of the disease is usually shrunken, becomes more prominent, and sometimes tense and tympanitic. The liver, in some cases, becomes greatly enlarged, as is evident not only on percussion, but to the eye. The urine is usually scanty from the onset of the disease, and in some cases is decidedly albuminous, or may be entirely suppressed. Sudamina appear on the skin, emaciation increases, and the patient dies from exhaustion.

In cases, however, of more rapid character, the fatal termination occurs before any very great wasting has time to occur. The little sufferer dies swiftly, in coma or delirium, in convulsions, or in an algid paroxysm, with its dimpled beauty almost unimpaired by the touch of the Destroyer. Memory brings back to me such a scene—a dead angel in the lap of weeping Love reposing, an incarnate statue chiseled by the inimitable hand of God.

"And but for that sad, shrouded eye,
That fires not, wins not, weeps not now,
And but for that chill, changeless brow,

* * * *

We still might doubt the tyrant's power,
So fair, so calm, so softly sealed,
The first, last look by Death revealed."

Ah! gentlemen, the world has witnessed many such sights caused by this malady. If what I am saying to you now shall

enable you, as I believe it will, to wrest one human flower from the withering touch of Death, I shall be more than recompensed for my labors.

Duration.—There is nothing fixed or definite in the duration of this disease. Death or convalescence may occur in twenty-four hours from the first appearance of the symptoms, or the case may terminate in chronic fever, with evidences of intestinal inflammation and ulceration, and finally, after weeks and even months of duration, may end in perfect recovery or death.

Pathological Anatomy.—In cases terminating in death within twenty-four to forty-eight hours, or even longer, from the invasion of the disease, no lesions have usually been found to unveil the source of the symptoms or account for the death of the patient. Where the case is protracted, however, important structural lesions have been found. Appearances of inflammation of the membranes of the brain, with extensive effusion, have been usually noted, and, in some cases, inflammation and softening of the brain substance. The *liver* has been found enlarged—in some cases enormously hypertrophied, and engorged with blood. The mucous membrane of the *small intestines* is almost universally changed in its appearance, and presents evidences of well-marked inflammation. The large intestines usually present no conspicuous change, except in those instances in which dysentery has complicated the case. In cases in which the disease has run a very protracted course, ulceration, thickening and consequent diminution of the calibre of the canal of the small intestines have been frequently observed.

Etiology.—What is the cause of cholera infantum? Various hypotheses have been offered on this subject. After many years of observation and reflection, I believe that it is due to *malaria*, and by malaria I mean the cause of intermittent fever. The facts and arguments in support of this view will be concisely presented.

In the first place, it is a *febrile disease*, and this fever, in a majority of cases, is of a marked *periodical* character, characterized by morning remissions and evening exacerbations, and in some cases is *positively* of an *intermittent* type.

2. It prevails chiefly, and I believe *solely*, in localities in

which the ordinary forms of malarial fevers prevail, and its gravity is in direct proportion to that of the contemporaneous remittents occurring in older subjects. I have often seen the adults of a family prostrated by periodical fever, whilst the tender infants of the same household presented all the symptoms of cholera infantum.

3. Other symptoms of cholera infantum strongly resemble those found in some of the forms of pernicious fever occurring in persons beyond the infantile age. The nausea, vomiting and purging are the characteristic symptoms of the choleric form of pernicious fever, as described by Morton, Torti and others. The unequal distribution of heat, and the coldness of the extremities in cholera infantum, bear striking resemblances to those present in the congestive or algid form of miasmatic fever. The cerebro-spinal symptoms so prominent in cholera infantum, are so frequently present in periodical fever that many authors have been led to consider irritation or inflammation of the brain and spinal marrow as the characteristic lesion, and as the origin of all the objective phenomena.

4. Both diseases prevail in the same seasons. Though periodical fever may appear at any season of the year, yet it is well known that it usually makes its advent with the warm season, and usually disappears, in a great degree, after the appearance of frost. It is true that periodical pneumonia may occur during the winter and spring, but this is an exception among those diseases classed among the pernicious fevers.

5. As will be seen, it is cured by the same remedies which are universally recognized as potential in the treatment of all forms of periodical fever.

6. The great tendency to sudden and spontaneous relapse observable in the recognized forms of malarial fever is equally as conspicuous in cholera infantum. In no other diseases with which we are acquainted are relapses so frequent as in these—certainly in none prevailing in this country.

7. Negative arguments are not wanting to support this view of its etiology. To what other cause can be attributed its existence? It is not due solely to heat, or else we should find it prevalent in the same latitudes in this country, especially in the

non-miasmatic districts. It is not produced by overcrowding or animal exhalations, for it is unknown in the largest and most densely populated cities of the world, as in London and Paris. Is it possible that a poison which shows so great malignancy in its effects upon the infant could prove innocuous to older children and adults? Is there any other grave disease known to which infants are liable from which adults are entirely exempt? Its existence is not, of course, due to the poison causative of Asiatic cholera, for it is an habitual epidemic, whilst the Oriental disease prevails at long intervals. That the vomiting and diarrhœa, as well as the fluids ejected, present some peculiarities in cholera infantum not *usually* observable in the periodical fever of adults, is true; but we may, however, observe that in cases of the algid and choleric form of pernicious fever, occurring in grown persons, we have not unfrequently observed not only these, but nearly all the symptoms of malignant Asiatic cholera. May we not reasonably attribute the peculiarities of the phenomena in cholera infantum, as distinguishing it from the usual forms of periodical fever, to the physiological susceptibilities and sympathies belonging to infancy?

The stomach, in the early period of life, is perverted in its functions by very slight causes. Indeed, vomiting in infancy may be considered almost a physiological phenomenon destined to protect the tender being from the consequences of simple distension on the one hand, or of deleterious food on the other. The mucous membrane of the intestines is also highly sensitive, and will usually bear the presence of nothing but the most innocent of all food—the mother's milk. It is needless to dwell upon the impressibility of the nervous system in infants, so well known even to the unscientific, and which we have sufficiently dwelt upon in our lectures on General Pathology in the winter course. But we may here observe that it is very probable that the nausea, vomiting and diarrhœa in the early stages are merely symptoms of perverted innervation, as in the rapidly fatal cases no lesion of the mucous membrane of the alimentary canal has been found to explain their occurrence. That the cerebro-spinal and sympathetic system of nerves are prominently perverted in their functions at the onset of the disease

there can be no doubt. All the symptoms indicate it, but whether the functions of the ganglionic system are primarily or secondarily disturbed, admits of debate, and is a question difficult to decide. My own impression is that they are usually simultaneously involved, and that there is no sufficient reason why such exclusive importance should be attributed to the cerebro-spinal system in this and other forms of malarial intoxication. It is true that the disturbances of the cerebro-spinal centres force themselves strongly upon the attention of the observer; but it is to be noted that in some cases the symptoms referable to this portion of the nervous system are but feebly pronounced, whilst the vegetative functions are as deeply and as seriously involved as occurs in Asiatic cholera.

We have seen heretofore that a person under the influence of malaria may present very slight external evidence of its action; that it may be indicated solely by a painful affection of a minute nerve, as in periodical toothache, or may declare itself by the most serious implication of the cerebro-spinal system, as seen in periodical cephalalgia, delirium, coma, convulsions, etc., facts disputed by no respectable authority. Why this morbific cause should show itself in so many protæan forms we cannot explain; but as we have intimated, it is highly probable that the physiological peculiarities of infancy may explain the peculiarities of the phenomena produced by its agency in cholera infantum.

We have been induced to say this much on the subject (confessedly obscure) of the pathology of the disease, not because we wished to establish a favorite theory, but that we believe that in this case a correct theory will lead you to pursue and persevere in a proper line of practice.

It is a fortunate thing for humanity to be able to introduce a disease not hitherto classed as such into the ranks of pernicious malarial fevers—the family of the diseases for which we have a remedy more potent than all others combined against all other maladies. Such efforts may be truly said, when crowned by success, to be triumphs of science and victories over death.

Treatment.—We now arrive at the most important branch of our subject in this peculiar disease. It has already been indicated by my remarks upon its pathology. For many years I

have treated this disease as a form of pernicious fever, and have met with the most gratifying results, and *I do not hesitate to say that the general adoption of this line of conduct will greatly diminish the mortality from this disease.* But there are difficulties to encounter in the treatment of this malady not usually observed in the pernicious fever of adults. The excessive commotion of the alimentary canal usually present, offers a very great impediment to the introduction of appropriate remedies; but the difficulty, happily, is not wholly insurmountable. With the proper knowledge of the action of the main remedies, and with watchful patience, discrimination and care, we may usually conduct the case to a successful issue, provided that treatment has not been too long postponed. You should lose no opportunity of impressing upon your friends the importance of early treatment in this disease. A few hours' delay is often a fatal procrastination.

Called to a patient *early* in the course of the disease, in the *day time*, in whom the symptoms are not very urgent, I usually prescribe calomel in minute doses. Mixed intimately with a few grains of sugar, in doses of from one-third to half a grain, it is placed on the tongue every half hour or hour, until the presence of bile in the alvine evacuations is clearly evident. At the same time we employ means to tranquilize the stomach. A sinapism is placed over the gastric region, and, if the extremities are *cool*, warm sinapised pediluvia are used, and frequently repeated. If the head is too *warm*, as it almost universally is, in the grave cases, cold water or ice is applied freely and assiduously. If delirium, or coma, or convulsions be present, the cold *douche* is employed. In our efforts to reduce the abnormal heat, we must, however, guard against *chilling* the infant. Cold water, as a rule, should be allowed freely as a drink. It is true that it is often soon rejected, but this is no objection to its repetition; for, besides washing out the acrid gastric and hepatic secretions usually present in the stomach, it also allays the agonizing thirst and reduces the abnormal internal heat. Granulated ice may also be freely given. If the vomiting is very persistent, you should promptly follow the sinapism with a *blister* of cantharides. Lime water mixed with milk, in equal

quantities, should also be frequently given in dessert-spoonful doses, cooled with ice. If symptoms of exhaustion from excessive vomiting and purging are present, give an enema of laudanum in gum arabic or starch water, say three or four drops in a dessert-spoonful of the vehicle, and repeat in an hour, if necessary. The employment of opium in the febrile diseases of children, however, demands great judgment and discrimination, of which we shall speak hereafter.

Called to see a patient *at night*, along with the means already advised, you will now make an important addition to your treatment. We *usually, unless the case is very urgent, postpone* the administration of the grand remedy, *quinine*, until the *late hours of night*. Then the violent excitement and commotion of the exacerbations have passed. The stomach is not then so irritable. Quinine, a sedative and narcotic, is assisted in its action by the physiological tendency of the nervous system to repose in the night season, and you have ample time to exhibit enough of it in order to prevent the threatened exacerbation of the next day. I am sure that the remedy is better borne, and produces its salutary effects in the most perfect manner, when exhibited in the late hours of night. At midnight, then, we can commence its use. To an infant of six months of age and under, we give a grain of Powers and Weightman's sulphate of quinine with a few grains of white sugar, diffused in a teaspoonful of cold water. To a child of twelve months we give two grains of quinine, and to one of eighteen months three grains. If the dose is immediately rejected, we repeat it over and over again every half hour. After a few repetitions enough will be absorbed by the mucous membrane of the mouth and stomach, or by the former alone, if it is not even swallowed to bring the little patient fully under its influence. If the first dose is, however, entirely *retained*, we allow the patient to rest for three or four hours. We then repeat the dose, and continue to repeat it until the thermometer in the axilla and the finger on the pulse indicate that rapid sedation is ensuing. In the large majority of cases, these effects will follow from the administration of the sulphate. The pulse will become slower and less active and bounding; the head will become cooler; and the ex-

tremities, if previously below the normal temperature, will become warmer. *"The heat will descend to the feet,"* to use the forcible language of Hippocrates. Not only this, but the vomiting will become less frequent, or will often *entirely cease. After the first dose of quinine has been absorbed,* the bowels will become more quiet, and the renal secretion more copious. The little sufferer will become tranquil and fall asleep, sometimes for hours without waking; but it can be easily aroused if necessary. The narcotism produced by quinine, in this respect, is unlike the stupor produced by opium; and besides this, instead of having a tendency to produce congestion of the brain like opium, it has, beyond all other remedies, the power of *removing an excess* of blood from the cerebral vessels. In five or six hours after the administration of quinine has begun, in the large proportion of cases seen early in their course, the fever will have *disappeared.* When this occurs, cease medication for the day. On the next afternoon or night, a slighter exacerbation will often make its appearance, and this may recur for two or three nights thereafter. If this is the case, repeat the quinine in similar or diminished doses, *giving it more freely in direct proportion to the violence of the fever.* At the same time, we continue the calomel, or employ blue mass, until the presence of pure, healthy bile in the dejections is perfectly evident. Now that the fever has vanished, you may associate opium in minute doses with the mercurials. If blue mass is given, have it triturated in a teaspoonful of simple syrup, and add the laudanum to it.

As long as the discharges are offensive, or as long as they are clay-colored or white or *watery,* we must continue the use of the mercurial and quinine. *The patient is not safely convalescent until the hepatic and renal secretions become normal.* Of course, after the fever has been conquered, we do not need the *sedative* impression of quinine, and therefore give it in small doses of a grain three or four times a day for four or five days. After this, we guard against relapse by resuming the use of quinine and mercurial, as soon as the hepatic secretion becomes vitiated or diminished, for as soon as this occurs, vomiting, or diarrhœa, or both, will return.

Should you be disappointed in bringing the patient fully under the salutary influence of quinine administered by the mouth, you may give it by the rectum, and should this be expelled, we have, thanks to a recent discovery, an invaluable resource in the hypodermic method. Dissolve the dose to be given in a half drachm of distilled water, by the addition of *two* drops of dilute sulphuric acid to the *grain* of the sulphate, and inject it beneath the skin of the arm, just immediately below the insertion of the deltoid muscle. Used in this way, only one-half of the quantity usually given by the mouth will be necessary. If you have to repeat the dose, inject it in the other arm in the same manner. This mode of medication, however, will be rarely required, for there are objections to its use in this way—the principal one being the excitement of local inflammation, and the production of troublesome abscesses. Usually, by persistence in its use, enough quinine will be absorbed by the buccal and gastric mucous membrane to bring the patient under its influence.

In regard to the employment of opium, much caution is required. It is not generally borne well at the commencement of the attack, especially if there be fever and determination of blood to the head. After a few days, when the system has been depleted by the excessive discharges, and symptoms of nervous exhaustion ensue, we may properly call upon its aid, and derive the most signal advantage from it. I prefer McMunn's elixir of opium to any other preparation for infants, and it may be given in doses of two to five drops, according to the age, and repeated at intervals of two or three hours, if necessary. Night is the best period for its administration, if the case will allow you to wait.

In *urgent cases, we can not wait until night* before we administer *quinine.* When the *danger is imminent,* it must be given *forthwith,* and *repeated* until the *patient* is fairly *under its influence.* As evidences of its sedative effects appear, discontinue or diminish the dose, and resume it if the fever does not continue to decline. Although the prominent symptoms may entirely disappear under this treatment, yet in many cases you will perceive that you have only produced an *intermission* of

the disease; you have "scotched the snake, not killed it." Symptoms of hepatic torpor recur with *diarrhœa* and *anorexia*, and more or less febrile disturbance; in a word, a relapse is threatened, but this is usually much milder than the initial attack. By a proper administration of the mercurial and quinine, with the addition of astringents, such as acetate of lead, nitrate of silver, oil of turpentine, infusion of logwood, or red oak bark, you can generally soon place your patient in perfect health again.

In regard to the diet, whilst vomiting and purging are incessant, you can not hope to nourish your patient. As soon as the vomiting ceases, however, you must commence to support it. The mother's milk is the best nutriment for it. If this is not to be obtained, then you will find the milk of the cow to be a convenient and as good a substitute as any other. In cases of extreme exhaustion, the juice of beef—that manufactured by Mr. Valentine in our midst—will often prove to be an invaluable adjunct.—*Virginia Medical Monthly.*

ART. II.—*Description of a New Battery for Galvano-Caustic Surgery.* By BENJAMIN F. DAWSON, M. D., of New York.

About six years ago my attention was first practically drawn to galvano-caustic surgery by my late friend Prof. Joseph Kammerer, and subsequently I had the pleasure of assisting him in many operations for amputation of the cervix uteri. These and other opportunities enabled me to appreciate the value of the galvanic cautery for many operations, and on my return from Europe in the fall of 1872, I brought with me the most approved form of battery then in use in London.

After considerable use of the English battery, however, I found there were two apparently insurmountable difficulties, which, it seemed to me, would prevent galvano-caustic surgery from being as generally resorted to as its great advantages urged it should be; these were the bulk and unreliability of the apparatus, to say nothing of the trouble of keeping the battery in condition for ready use. Fortunately, however, a few years

ago, Dr. John Byrne, of Brooklyn, Long Island, gave his attention to galvano-caustic surgery, especially in gynæcological practice, and, realizing all the disadvantages connected with the expensive and cumbersome imported batteries, endeavored by studying out the subject, and making numerous experiments, to construct a battery which, if less bulky and expensive than the foreign batteries, should yet equal them in all other respects. It is not necessary for me to describe the results he achieved, excepting to say that he some time ago gave to the Profession a battery so superior in all respects over any heretofore made on either side of the Atlantic, that "Byrne's battery" has long been looked upon as the final solution of the question, as the cheapest, most portable, and most powerful battery for caustic surgery.

While Dr. Byrne was making his experiments, I was also turning my attention to the same subject, and from time to time made experiments, and repeatedly talked over the subject with Dr. Byrne, always with advantage to myself, owing to his perfect knowledge of the subject of electricity in all its bearings. Nearly a year ago I finally succeeded in constructing a battery, which, however, differed from "Byrne's" in all respects, and at the same time was less expensive and bulky. This battery has now for some months been subjected to the severest tests as to power and reliability, and, having more than equaled my expectations, as well as those of others who have tested it, I venture to offer it to the Profession as the result of efforts to place galvano-caustic surgery within the easy reach of those desiring to avail themselves of its advantages.

In all the batteries heretofore constructed, the negative plates have been composed of pure carbon, which constitutes one of the best, cheapest, and most durable conductors of electricity, without being affected by the acid in which it is immersed. In small, compact batteries, such as "Byrne's," carbon has the disadvantage of fragility, a slight jar or knock easily fracturing one of the carbon plates. The perviousness of the carbon also renders it difficult to keep the connections clean, as the acid soaks up the latter, and corrodes them more or less.

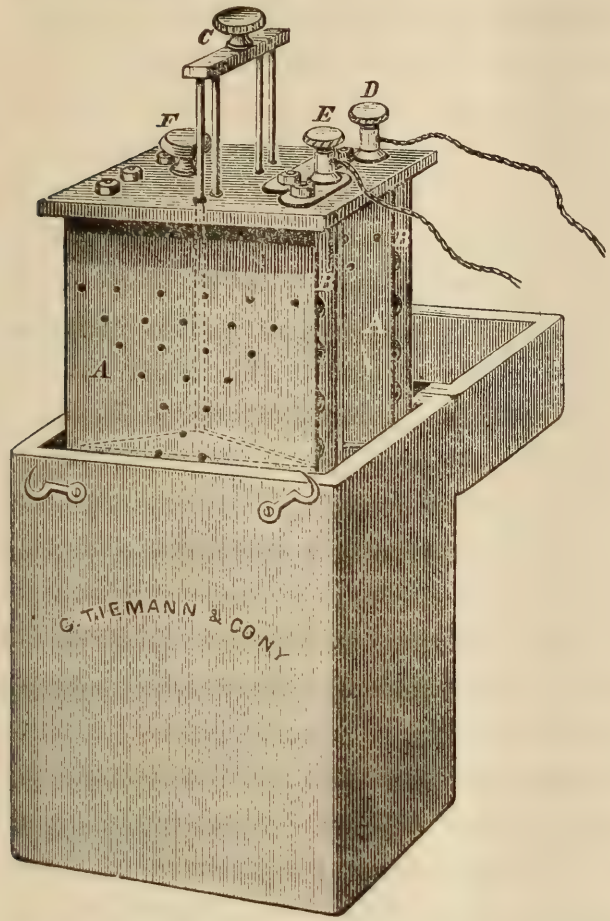
Again, the granular surface of the carbons is exceedingly favorable to the collection of effete matter, such as small hydrogen bubbles and the sesquioxide of chromium, which collection sooner or later causes what is known as polarization of the battery, and consequently more or less insufficiency of power. Most of these difficulties Dr. Byrne has overcome in the construction of his battery, especially polarization, which latter he prevents by pumping air into the fluid after the manner of the French blast-battery, this agitation of the fluid removing the effete matter from the carbon or negative plates. Still notwithstanding the great improvements Dr. Byrne made, my experience led me to look for still greater ones, and, if possible, to substitute some other material for the negative plates. After numerous experiments, I decided that platinum, as has been long known, was unequaled as a negative plate, excepting that, if used over a certain thickness, it increased the expense of the batteries too much to make them available to the majority of the Profession, and if used too thin, it had the objection of heating, and thus causing the fluid to become hot, and even to boil, an objection too great to allow its use. However, this heating of the platinum plates I also finally succeeded in overcoming, by the simple device of bordering thin plates with lead, so that the current was thus taken off the plate on all sides, instead of having to traverse its whole length, for it is the resistance of platinum as a conductor that causes it to heat.

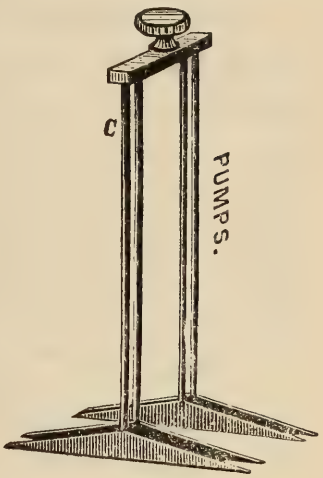
Polarization, also, I have obviated, by perforating the zinc plates, and by the very simple device of placing agitators between the negative and positive plates, whereby the hydrogen bubbles and sesquioxide of chromium are removed with facility.

The battery, therefore, which I have devised seems to me, after prolonged trial, to meet all the requirements of a perfect galvano-caustic battery, and for compactness, durability, power, and cheapness, equals, if it does not surpass, any heretofore offered.

The battery shown in the accompanying illustration is composed of but two cells, made of hard rubber, in each of which are two positive (zincs) and one negative (platinum) plate, all measuring but four and a half by six inches. The zincs

(A) are perforated by a number of small holes, and are adjusted half an inch apart, between them the platinum plates being adjusted, the lead borders showing at B. On each side of





the platinum plate in each cell are rubber-covered metal pumps or agitators (C), worked by means of a small knob. D and E are the connecting screws. The entire battery requires but a little over a quart of fluid to exert its fullest power, with which amount it will keep up a most powerful action, long enough for the most prolonged operation, by moving up and down slowly the pumps or agitators (C). By this action, the old or exhausted fluid between the plates is thrown out through the perforations, and the outside fresh fluid takes its place, and by this polarization is wholly overcome, and, according to the degree of heat required, the pumps are worked more or less fast. In fact, this device develops so much power that it is possible to melt platinum instruments which other batteries only heat to a red heat.

In using this battery, the following must be carefully observed:

Fill each cell with acid to within one and three-quarters inch of the top, and then support the plates out of the acid by the upright which screws into the back of the box. Adjust the wire-conductors into the screw-cups, and bind tightly with the screws; then attach the wire-conductors to the electrode to be used. When ready to operate, lower the plates into the fluid, and, according to the degree of heat desired, work the pumps by means of the rubber knob slow or fast, *never violently or in other than a perfectly perpendicular direction*, but always elevate and depress them to their fullest extent. The moment the operation is finished, or there is any suspension of the same, lift the plates out of the fluid, and rest them on the upright; this saves the wear of the zincs and prevents exhaustion, heating and wasting of the fluid. If this can not readily be done, the operator must open the connection in the handle of the electrode.

The wire-loop cautery should always be adjusted around the part to be removed, cold; and when firmly in place, heated. The other cauteries are best used when heated first. Always wash off the plates immediately after using the battery by pouring water thoroughly over and between them; especially be careful that no trace of acid remains on the portions of plates close to the rubber-top plate.

If a very small cautery is used, fill the cells only half or two-thirds full or lower the plates only to the second pin in the upright. A white heat will soften and melt the platinum cautery. Always see that all nuts and screws are tight. Never use fluid a second time, unless using a very small platinum cautery. Keep all connections clean and bright.

The zincs should be amalgamated after using the battery a few times; to do this, remove them by unscrewing the nuts, wash them in dilute sulphuric acid, at the same time rubbing them with a few drops of mercury, and wiping them off thoroughly before refastening them in their places.

Directions for Preparing one Gallon of Fluid.—Hot water, 106 ounces (fld.); bichromate of potassa, 1½ lb.; pure sulphuric acid, 36 ounces (fld.)

Dissolve the potassa thoroughly, and add the sulphuric acid very slowly. Do not use the fluid until cold.

The battery is manufactured by the well-known house of George Tiemann & Co., No. 67 Chatham Street, New York.

ART. III.—*The Opium Habit, and "Opium-mania Cures."* By STANFORD E. CHAILLÉ, A. M., M. D., Professor of Physiology and Pathological Anatomy, Medical Department University of Louisiana.

An acquaintance, soliciting friendly and professional aid, avowed with humiliation that he was a slave to the opium habit. He gave a familiar history of remorse for the past, shame and suffering for the present, and a dread for a future of degradation. While the emotions were too active, the memory good, and judgment sound, the enfeebled will had become utterly powerless to master the remorseless appetite. Good resolutions, often repeated, had served only to increase the demoralization; for memory registered against each one a violation of conscience and of self-respect.

Striving to inspire my patient with increased horror of his dreadful habit, and at the same time with needful courage to abandon it, I yet warned him how inefficient were prescriptions, that the chief reliance must be placed upon his own firmness and endurance; that when these failed him, then judicious restraint to enforce abstinence must replace his own enfeebled will, and that I would sustain and control him to the extent of the power he would entrust in my hands. Unlimited power was freely given, abject submission promised, and the conflict began between sound reason on the one hand and a depraved appetite on the other, with a poisoned body the battle-field, and an enfeebled will vacillating from one to the other side.

In painfully tedious succession restless days followed sleepless nights, and both were rendered so exhausting by clammy sweats, by gnawing gastric pains, by sickening nausea, and by depressing broodings of the imagination, that the suffering body

was tortured to the limit of endurance, and self-destruction was threatened as preferable to the agony imposed by abstinence. This, after long-continued abuse of opiates, is attended always, in my experience, by profuse sweating and diarrhœa; so that nature requires no aid from art to cleanse the circulation of its perilous poison. To replenish the blood with healthy constituents, milk-punch and all nourishment the stomach would bear were, from the first, freely given. Such simple remedies as the varying symptoms seemed to indicate were administered; and of those intended to act on the nervous system, none mitigated the sufferings to so great an extent as digitalis. But the chief treatment was a tyrannical persistence in total abstinence from all opiates, to which were added sympathetic assurances that this was the shortest and only road to success, and that in from five to eight days the intense suffering and sleeplessness would diminish, while appetite, courage, and self-control would correspondingly increase.

A week weary to the physician, far more weary to the patient (from the third night to about the sixth day having been as usual the period of greatest suffering), ushered in a fair prospect of success, which subsequent weeks fully realized. After two months my patient wrote: "I have improved in weight fifteen pounds, my appetite and digestion are first-rate, and I sleep sweeter than at any time during the past three years, that is, since my habit began. I have not taken nor had administered to me, in any form, any opiate or alcoholic stimulant of any kind since I saw you; and what is far more encouraging, I have no desire for the slow poison, and believe now, as I do in my God, that nothing on this earth shall ever wield such an influence over my moral nature as will cause me to succumb to its terrible and ravaging influence. For all this happiness, doctor, I thank you, and owe it solely to your firmness and medical treatment, which I can never forget as long as this new blood courses through my veins. The dawn of a new life is already opening before me, and every morning, as I awake, I feel the terrible pang of having wasted three years of my best life. A month later he wrote: "As far as the drug or any other stimulant is concerned, I never have the least desire

for it; on the contrary, I loathe the very mention of opium."

Though experience sadly teaches that the opium habit acquires greater power, and is more liable, when interrupted, to relapse, than even alcoholism, and that the only trustworthy remedy is *enforced* abstinence long continued, still, I can not refrain from deriving great hope from, and entertaining great confidence in, the above assurances of my patient. The good result is, of course, attributable chiefly to his own power of endurance and high moral sense, which fortunately his opium habit had left sufficiently vigorous to render him acutely sensitive to the humiliation of his bodily and mental condition. That one possessed of so much intelligence, so readily and powerfully influenced to good, should have been for many months the credulous dupe of an advertising quack, is proof that it is a duty to society to expose the pretences of these remorseless charlatans, who poison the afflicted with one hand, while robbing them with the other.

When I undertook my patient's case, he had been for a long time and was then taking "Dr. Beck's Opiumania Cure." The symptoms, with a smell at the mixture, were sufficient to prove that the ingenious Dr. Beck appeased the diseased appetite by feeding it; that he cured the opium-mania by persisting in the abuse of opium; and that, by thus confirming the malady, he perpetuated the demands of his victims for incessant supplies of the divine gift, which he vouchsafes to confer on his suffering fellow-creatures at the self-sacrificing rate of $10 per four ounce vial!!

This marvellous vial, with its secret contents discovered by the fortunate genius and medical wisdom of Dr. Beck, was at once captured; in order, chiefly, that the total abstinence from opium insisted on might be successfully enforced, and subordinately that the proofs, to me already satisfactory, of the composition of this "opiumania cure" might be conclusively tested by chemical analysis. This has been ably and carefully done by the accomplished chemist of the N. O. Charity Hospital, Mr. J. Johnson, and his instructive report is appended to this article.

Prior to the letters already quoted from my patient, he wrote:

"I send you all the papers and documents relating to Dr. Beck that I can find. He has sold me this medicine nearly a year, and the effects were about the same as opium, and I fell off in weight instead of increasing. Since you cured me I have increased ten pounds. [After abstinence this increase of weight is usual.—S. E. C.] Notwithstanding the testimonials speak well of Dr. Beck, I look upon him as the greatest humbug of the age; for, when you once get under the influence of his mixture, it becomes as difficult to break off and take other opiates as to quit the use of opium itself. I can look back and see it all now, but could not then, for I was chained, and knew not how to get unbound."

These papers and documents now in my possession, furnish the following entertaining information by Dr. Beck as to himself and his testimonials. Nobly reckless of expense when inspired with the hope of doing so much good—and of selling so many $10 4-oz. vials!—he supplies any supplicant with a neat twenty-page circular, adorned with the "counterfeit presentment" of his philanthropical lineaments. Like great prophets, his merits are too transcendent to justify any untimely modesty; and Dr. John Crofton Beck gushingly informs the admiring world of his age, place of birth, race, previous condition, etc. Proud Indiana claims him as her son, the fortunate Medical College of Ohio gladly adopted him in 1848, "after one course of lectures," as its professional child. Thus launched, greatness swiftly followed. In 1858, behold! him Professor of Medical Jurisprudence in the Cincinnati College of Medicine and Surgery, and in 1862 transferred to the Professorship of Anatomy and Physiology. Patriotism then triumphing over love of honorable station, he became Surgeon of the Fifty-third Kentucky Volunteers. He was editor for several years, "with recognized ability," of the "Cincinnati Medical and Surgical News," President of the School Board of Newport, Ky., and the family physician of General Grant's father. Finally, since 1870, he has self-sacrificingly devoted himself, at No. 112 John street, Cincinnati, "especially to the cure of opiumania." It is encouraging to be assured, especially by Dr. Beck, that Dr. Beck's skill, success, honesty of purpose, application to duty, studious

habits; zealous energy, and unlimited resources, "inspire the most despondent with a portion at least of his own unbounded courage and enthusiasm"; that "no pecuniary consideration could induce him to encourage a palpable delusion," and that *Brother* Beck (for he is a brother Methodist as well as a brother Mason) is so gorged with piety that he could not "trifle in matters of important moment to the present and hereafter of a fellow-being!"

As open and disgusting as is this brazen-faced quackery, it is not so mortifying as are his assurances, fortified by quotations and specifications, that members of an honorable profession, who are now respected in its ranks, have furnished testimonials most flattering to him and to his "cure," and most deceptive to the public. It is earnestly hoped that this shameless impostor is as bankrupt in truth as in modesty, and that these published testimonials may prove to be forgeries, whereby he calumniates the following members of the Medical Profession—viz.: Dr. Lee Holt, of Colaparchee, Ga., ex-Division Surgeon of Stonewall Jackson's Corps, C. S. A.; Dr. J. E. McMillan, of LaGrange, Ga.; Dr. Luke W. Smith, of Canton, Miss.; Dr. J. C. Bierbower, of Austin, Texas; Dr. J. C. Kerr, of Cincinnati, Ohio; Drs. Whitesel, Cooper, Cochran, Rawlins, Canady, Norris, Lewis, Crouse, and Hackleman, of the Medical Association of Ogden, Indiana; and Drs. Dawson, Doherty, Parker, and Dunlap (supposed to be), of Louisa, Lawrence county, Ky.

It is doubtful if any disease is so utterly destructive of the happiness and welfare, not only of the afflicted individual, but also of family, friends and society, as is the opium-mania. Recorded experience is unanimous in enforcing, that in no condition is the demoralization so complete and hopeless. The poisoned imagination revels in the construction of ingenious falsehoods, and becomes reckless of the endless mischief which exaggeration, untruthfulness, and scandal inflict. While strict veracity even in little things imposes an impossible task on a brain long fed with opiatized blood, oaths the most solemn are violated while the lips are yet moist with the sacred words, and conscience is too exhausted to retaliate with even one pang of remorse. Physical suffering and moral degradation alternate

endlessly with mental stupor, and produce a condition worse than imbecility or insanity. Against these, society protects itself (though still inadequately) by its familiarity with these conditions, and by its laws; but the opium-mania is less generally known, the victim often undetected, his acts misconstrued, the misery he inflicts unappreciated, and our inefficient laws ignorantly fail to afford any protection whatever either to the afflicted person, or to others necessarily involved in his affliction. Thousands of households in this, tens of thousands in all civilized lands, have sad cause to bitterly mourn that laws do not permit, and fail to provide for the application of the *only reliable remedy*—total abstinence from the poison enforced by incarceration in appropriate asylums or hospitals. With full legal liberty to destroy and degrade himself, to inflict misery and shame on family and friends, and to injure society in common with these, the unhappy victim is constantly lured by our newspapers and journals to squander his means upon the "opium-cures" of advertising quacks. In this nefarious work, "Harper's Weekly"—*the* "journal of civilization!"—is especially prominent, assigning places in every issue of its *civilizing* columns to these advertisements, which, though perhaps more decent, are not less injurious than the "New York Herald's" advertisements of abortionists. A like trade is pursued in England. The "British Medical Journal," September 4, 1875, states that a "sure cure for the opium habit" was found to contain two grains per dose of sulphate of morphia to be taken three times a day!

Indignant at, anxious to correct such evils as are these advertisements, and as is the lack of legal protection for the hopeless and maniacal abusers of opium, alcohol, etc., the assurance will be given, probably by lawyers and so-called statesmen, that any effectual laws would endanger the "freedom of the press" and the "liberty of the subject"—an assurance which forcibly recalls the saddest cry of justice and of true freedom, "Oh! Liberty, how many crimes are done in thy name!"

For the benefit of those desiring further information as to this subject, attention is called to the well-known and classical "Confessions of an Opium-Eater," by Thos. De Quincey (Tick-

nor & Co., Boston, 1850); to the instructive book, "The Opium Habit" (New York, Harper & Bros., 1868); and to the more useful and practical "Opium and the Opium Appetite," by Alonzo Calkins, M. D. (Lippincott & Co., Philadelphia, 1871). "Opium-Eating," by an Habituate—from Claxton, Remsen & Co., Philadelphia, 1876—is one of those many bocks which cause an intelligent reader to stand aghast at the insanity of the author and the folly of the publisher. Should my reader desire to experience true grief for an ill-spent dollar, let him invest it in this créme de la créme of trash.

CHEMICAL ANALYSIS OF DR. BECK'S "OPIUMANIA CURE."

1. Capacity of vial is four fluid ounces.

2. Contents measured two fluid ounces.

3. A glance at the deep-brown, dirty-looking mixture shows it to be one by no means homogeneous in character, and by taking one-half ounce and subjecting it to filtration through paper, it was easily separated into a clear brown liquid and a dark-brown residue. The liquid obtained was devoted to a preliminary examination, with the object in view of gathering a general idea of the nature of the compound and the difficulties that would have to be overcome in making an analysis. No well-defined opium reäctions could be gotten, they, of course, being masked by the deep-brown coloring matter present. About the only definite information derived was that the liquid contained considerable alcohol, a small quantity of free acetic acid, and a good deal of substance in solution.

A quarter ounce of the original mixture was next evaporated on a water-bath to half its bulk, to free it from alcohol. The aqueous remainder, diluted with water, subjected to dyalysis, with hope of obtaining a tolerable colorless solution of whatever crystalloids might be contained in it, gave a result entirely unsatisfactory, on account of the coloring matter passing through the membrane with great rapidity.

Another quarter ounce was evaporated, as in the previous experiment, and rendered slightly alkaline with liquor ammonia, then shaken with warm amylic alcohol. Again the coloring matter became an obstacle, as it proved readily soluble. The amylic residue, however, gave distinct morphia reäctions.

Experimenting upon the liquids contained in the dyalizer, I found precipitation of the coloring matter by means of acetate of lead gave the best result. Resorting to this method the liquids of the dyalizer were mixed, and the resulting mixture treated with solution of acetate of lead as long as it produced any precipitate. The mixture having been warmed, allowed to cool, and filtered—the precipitate being reserved (A)—gave a clear and nerly colorless solution, through which a current of sulphuretted hydrogen was passed until all lead left in the filtrate had been converted into sulphide. After filtration a colorless liquid was obtained that behaved with reägents as follows: Solution of perchloride of iron gave a deep blue color; iodic acid, a brown color; solution of iodic acid mixed with starch, a blue color; tannic acid, a white precipitate; liquor potassa, a white precipitate almost entirely soluble in excess. Filtering off the insoluble portion (B), the alkaline solution treated with a current of carbonic oxide gave a white precipitate, which, after collection on a filter, proved to consist of needle-shaped crystals, possessing a bitter taste, not very soluble in water, but easily so in dilute acids. Portions of this substance, placed upon a porcelain slab, gave, with nitric acid, a yellow-red color; sulphuric acid containing a minute quantity of nitric acid, a violet-red color; molybdic acid dissolved in sulphuric acid, struck a violet color, which disappeared on adding a few drops of water, leaving a brown, turbid fluid.

That we have morphia present can not be doubted.

The insoluble portion obtained in (B) proved insoluble in cold and readily soluble in hot alcohol; very soluble in chloroform; soluble in dilute sulphuric acid, the solution giving, with liquor potassa and carbonate of potassa, white precipitates; chlorine water added to the dilute sulphuric acid solution, produced a yellowish-green coloration, which, on the addition of ammonia, changed to red; nitric acid gave a colorless solution that turned yellow when warmed.

That the substance we are dealing with is narcotine will hardly be denied.

The acetate of lead precipitate (A) was next suspended in a little water and treated with a stream of sulphuretted hydro-

gen. After a complete decomposition and filtration, a clear, slightly colored liquid remained, that behaved as follows: Solution of perchloride of iron gave a deep-red color, which did not disappear on addition of sulphuric acid and metallic zinc; nitrate of silver, chloride of barium, and acetate of lead, all gave white precipitates.

Meconic acid thus indicated, we have now the three principal constituents of opium; we have furthermore learned the best way of proceeding in making a quantitative estimate. So, following out the path laid down in the preceding experiments, a half ounce of *the cure* was evaporated on a water-bath until quite dry, dissolved in one-half ounce of hot water, treated with solution of acetate of lead, filtered, a current of sulphuretted hydrogen passed through the filtrate, all as previously described, with the exception of both precipitates being carefully washed. The resulting solution was concentrated till it measured two drachms, treated with liquor potassa in quantity sufficient to dissolve all of the precipitate at first produced, that was soluble in excess, filtered—the filter being washed with cold water—treated with a current of carbonic oxide for about half an hour, exposed a couple of hours to a low temperature, and then thrown upon a *counterpoised* filter.

The crystalline residue, washed with a little ice-water, and dried in vacuo over sulphuric acid for twenty-four hours, weighed 3.23 centigrammes, or about one-half grain. Now, taking the percentage of morphia in opium to be ten, which I believe to be a fair estimate in this case, this will give us five grains of opium to half an ounce, or one grain and a quarter to one drachm.

J. JOHNSON,

Chemist and Apothecary Charity Hospital, New Orleans.

—*New Orleans Medical and Surgical Journal.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—*Cardiac Hypertrophy, with Remarks.* By THOMAS J. LEE, M. D., Plattsburg, Miss.

Correct views respecting the two forms of enlargement of the heart—hypertrophy and dilatation—especially as regards the abnormal circumstances under which they are produced, their relations to each other, and the effects of each, are important on account of their direct practical bearings. The clinical study of cardiac disease has lately led to a complete reversal of certain ideas connected with hypertrophy, and the consequence is a reversal of the practice which, until quite recently, the existence of this form of enlargement was supposed to require. But there is reason to believe that this change is not so generally known or so fully appreciated by a great many practitioners of medicine as, in view of its importance, is to be desired. This consideration, together with the mortification of having seen several cases very erroneously treated, mainly has determined the writing of this article. I shall endeavor in a few remarks to embody a concise expression of practical views which, it is believed, are in accordance with sound pathology, as well as with the conclusions drawn from clinical experience, and which, if not in some respects original, have not, as it seems to me, been fully presented, and their application to practice sufficiently considered.

Hypertrophy and dilatation are effects of an obvious mechanical obstruction to the circulation in the great majority of cases. It is probable that in the comparatively few instances in which an obstacle is not apparent, it nevertheless exists. This remark is, however, more applicable to hypertrophy than to dilatation. Practically, it may be assumed that if the heart be hypertrophied, there either is or has been over-accumulation within the cavities of the heart from some impediment to the free passage of the blood through the cardiac orifices or the vessels. My experience is that in by far the greater proportion of cases the obstacle arises from valvular lesions, which occasion either

obstruction or regurgitations, or both; and it will suffice for the present purpose to limit attention to hypertrophy and dilatation occurring as consequences of those lesions. Valvular lesions give rise to hypertrophy and dilatation, which, when death results from disease of the heart, are usually found to be combined in variable proportions. It is rare to find hypertrophy without dilatation, or dilatation without hypertrophy. Both forms of enlargement are alike consequences of valvular lesions, but the latter do not give rise indifferently to the one or the other form. What are the laws which govern their mutual relations? In answer to the question, the following may be stated as deductions from clinical facts. Hypertrophy is uniformly the first form of enlargement produced as a consequence of an obstacle to the circulation, provided the muscular structure of the heart be unaltered and its vigor unimpaired. Hypertrophy, under these circumstances, precedes dilatation. The two forms of enlargement do not, as stated by some, go on together from the commencement, but dilatation begins after hypertrophy has been going on for an indefinite period. In the course of time, dilatation is as inevitable as the precedence of hypertrophy is invariable. These laws hold good except in the cases in which the walls of the heart are the seat of fatty degeneration, or other changes, or the muscular power of the organ from any cause has been permanently impaired. The following are clinical facts leading to the foregoing deductions: In persons affected with valvular lesions, together with more or less cardiac enlargement, who are cut off by some intercurrent or incidental affection before suffering from any marked symptoms referable directly to the heart, examination after death shows hypertrophy either existing without dilatation or greatly predominating over the latter. Per contra, in persons who die after a protracted duration of disease of the heart, having presented before death characteristic symptoms such as dyspnœa, lividity, and general dropsy, dilatation is found to predominate over hypertrophy.

The production of hypertrophy, in view of the obstacle which occasions it, is compensatory. In health, the vigorous contractions of the ventricles is complete—that is, the blood is en-

tirely expelled, leaving the ventricular cavities void at the close of the systole. It is not easy to demonstrate this, but proof was afforded in a case falling under my observation while a student in the Charity Hospital Medical College at New Orleans, in which a small mass of calcareous deposit projected from the ventricular aspect of the anterior curtain of the valve. Directly opposite to this mass the endocardial membranes, over a space corresponding in size, was opaque and thickening—in fact, callous—the membrane surrounding this spot being perfectly normal. The callosity was obviously due to long-continued repetition of forcible contact with the calcareous mass, thus showing that the endocardial surfaces are brought into apposition by the systolic contractions. For this completeness of the ventricular contractions to continue when an abnormal obstacle to the circulation exists—for example, let it be supposed that the aortic orifice is contracted—the power of the contractions must be increased proportionally to the impediment caused by the contraction of the orifice. This increased power is a result of the obstacle to the egress of blood through the aorta, and the consequence is increased muscular growth or hypertrophy of the left ventricle. This increased growth imparts to the ventricle a greater amount of power, so that its capability to compensate for an increasing difficulty is extended in proportion to the progress of the hypertrophy, the latter conversely keeping pace with the increase of the obstacle due to the progressive obstruction at the orifice of the aorta. The same results follow when lesions, either obstructive or regurgitant, are situated at the mitral, tricuspid or pulmonic orifice, the difference being chiefly as regards the ventricle first affected. The laws are, first, augmentation of muscular power compensating for the obstacle, or proportionate to the undue accumulation of blood in one or both of the ventricular cavities; second, increased muscular growth or hypertrophy; third, greater capability of exerting muscular power proportionate to the amount of hypertrophic enlargement. It is evident from this view of the immediate pathological consequences of valvular lesions that hypertrophy is a conservative provision designed to obviate ulterior morbid effects. This idea, however, has but recently

been appreciated, or, at all events, it is only of late that it has begun to exert its legitimate influence on practice.

Practitioners have aimed to diminish hypertrophy or prevent its further progress, and for this end potent measures have been resorted to—viz., copious bloodlettings and other methods of depletion, low diet, and as much quietude as possible. So far from these objects of treatment being desirable, they conflict directly with conditions on which the comfort and safety of the patient depends. The practitioner should strive rather to maintain the hypertrophy and to govern its increase in proportion to the increasing impediment to the circulation due to progressive valvular lesions. The existence of hypertrophy does not call for measures to lower the powers of the system and weaken the heart; but, on the contrary, the body should be well nourished and the vigorous action of the ventricles promoted. Not only are depletory and debilitating measures uncalled for by hypertrophy, but an opposite plan of treatment is indicated—viz., a good diet, tonic remedies, and exercise, so far as it can be taken without a sense of discomfort.

It is somewhat difficult at once to receive practical views diametrically at variance with those which have hitherto guided medical practice, under the sanction of high authority; but clinical observations, as well as sound pathology, show the importance of hypertrophy as a conservative provision against the secondary and remote evils arising from valvular lesions. As a rule, these lesions, so far as symptoms are concerned, are latent, while the impediment to the circulation which they occasion is compensated for by the muscular growth of the heart. This period of latency often lasts for many years. Persons experience no inconvenience from symptoms referable to the heart leading them to be apprehensive of cardiac disease. They do not go to the physician with ailments dependent on the condition of the heart for a long time after the lesions of the valves have induced hypertrophy. The existence of cardiac disease at this stage is often ascertained incidentally, patients coming under observation with various affections which have no direct connection with the heart. Moreover, of persons affected with valvular lesions and hypertrophy, they have remained for the

longest period exempt from distressing symptoms referable to the cardiac disease, who have continued to live well and take abundant exercise, not being fully aware of their condition, and not subjected to debilitating medication. My own observations furnish a few instances strikingly illustrative of this remark. Numerous cases have been reported by writers. In fine, the alternative being between hypertrophy and dilatation in cases of valvular lesions which, by obstruction or regurgitation, occasion an impediment to the circulation through the heart, the former is not merely to be preferred as a choice of evils, but it is highly important as a protection against the latter. Hypertrophic enlargement of muscular organs has its bounds. Having attained to a certain size, their further increase is impossible. The heart, like the voluntary muscles, in addition to its normal extent of development, has a capacity for only a definite amount of abnormal growth. The restriction to hypertrophy is inherent in the muscular tissues. Extrinsic circumstances can not carry the growth beyond a fixed point. On what does this intrinsic limitation depend? This inquiry can not be answered without more knowledge of the mechanism of muscular growth than has yet been acquired. It appears not to be settled demonstratively whether the muscles increase in size by the formation of new fibrillæ or by the enlargement of those already formed. In the one case, hypertrophy involves a hypergenesis of the structural elements; in the other case, the process is simply exaggerated nutrition. The former is to be inferred from the extent of the capacity of the muscles in hypertrophic enlargement. This intrinsic capacity, as regards the heart, probably varies in different persons. The limits of hypertrophy having been reached, and the impediment to the circulation persisting, dilatation necessarily follows. So soon as the muscular power of the ventricle is inadequate to completeness of contraction, and the walls of the heart meet with the resistance from the blood accumulated within the cavities which they can not overcome, dilatation becomes a necessity. From this epoch dilatation goes on with a rapidity, other things being equal, proportionate to the distension of the ventricles from over accumulation. In this way dilatation becomes combined

with hypertrophy, and the dilatation is more or less predominant, according to the degree of impediment to the circulation, and the duration of life after the hypertrophied growth has ceased. When the latter has reached its utmost bounds, and the existence has been prolonged so that the dilatation is extreme, the heart attains to an enormous size, well described by many of the older writers. The pathological processes involved in the production of hypertrophy on the one hand, and on the other hand of dilatation, it will be observed, are quite different. In hypergenesis and hypernutrition, the processes are vital, but distension and dilatation are processes purely mechanical. The former results from the exaggerated power of a vital function—viz., muscular contraction; the latter process from passive yielding of the tissues.

In this sketch of the production, successively, of hypertrophy and dilatation, it is assumed that the muscular structure of the heart is unchanged, and that morbid weakness of the organ does not exist. If the walls of the ventricles have undergone extensive fatty degeneration, for example, the rule of the succession of hypertrophy and dilatation may not hold good. A vital reäction sufficient to overcome the increased resistance is not called forth under the circumstances. The hypertrophic growth is slight or wanting. Yielding of the ventricular walls takes place speedily or at once, and dilatation thus occurs with little or no hypertrophy.

Weakness of the heart induced from any cause—for example, injudicious treatment by bloodletting and other debilitating measures—may cause an arrest of the hypertrophic growth before it has reached its intrinsic bounds, and in this way is hastening the epoch when the enlargement by dilatation commences. If the heart be greatly weakened by organic change (fatty degeneration), the ventricles may yield to the distension occasioned by the accumulation of the blood in the cavities without any impediment to the circulation from valvular lesions or other obstacles, except the diminished muscular power of the organ.

Clinical experience furnishes examples of dilatation resulting exclusively from the latter cause. And, according to the

foregoing statements, if, in connection with valvular lesions, dilatation be found after death to exist, either without or with only a slight degree of hypertrophy, we should expect to find the muscular structure altered. In other words, in cases of enlargement of the heart proceeding from valvular lesions, if hypertrophy exist alone or in a marked degree in connection with dilatation, we should expect to find the muscular structure normal, save as regards the morbid growth. Clinical experience verifies the correctness of these statements.

Of the two forms of enlargement of the heart, dilatation is the form to be dreaded. The production of hypertrophy, as has been seen, for a certain period compensates for an existing impediment to the circulation, and is a conservative provision. It is otherwise with dilatation. This is evidence that the ability to overcome an abnormal resistance no longer exists. The organ now begins to give way, and having once begun to yield, the dilatation goes on progressively, with more or less rapidity, according to various circumstances, intrinsic and extrinsic. After a time, the dilatation predominates over the hypertrophy. This is an important epoch in the progress of cardiac disease.

From this period distressing symptomatic events referable to the cardiac disease are liable to occur—viz., dyspnœa, orthopnœa, and general dropsy. Prior to this epoch, although the hypertrophy and dilatation have existed and been gradually increasing for many months or even years, the patient may not have experienced symptoms which led him to suspect cardiac trouble. It is at this epoch that frequently cases for the first time come under medical observation. The evils and danger connected with the disease arise mainly from the weakness and incompleteness of the heart's contraction. The cavities are constantly over-distended, and as the muscular power of the organ diminishes more and more, the over-accumulation of blood and consequent dilatation progressively increase. Death, not attributable to an incidental occurrence or an intercurrent affection, but due directly and exclusively to the cardiac disease, takes place in consequence of over-distension and a loss of muscular power amounting to paralysis.

When death is in this way produced, it occurs after a pro-

longed period of intense suffering. Happily (we may almost say), a fatal result as thus produced, in a majority of cases, is anticipated by some one or more of various contingencies and accidental events, such as the formation of clots in the heart, œdema of the lungs, pleuritic effusions, apoplexy, etc.

Regarding the evils and danger of dilatation, as well as the compensatory and conservative character of hypertrophy, it is sufficiently obvious that the objects of treatment should be to maintain the latter and postpone the former. Hence, it is clear that measures relating either to diet, exercise, or medication, which weaken the muscular power of the heart, must prove hurtful in proportion to their potency, since they conflict directly with the objects just stated.

That the practice of treating patients affected with valvular lesions and enlargement by bloodletting, low diet, and extreme quietude, has been mischievous, is not less intelligible on rational grounds than evidenced by clinical experience. The objects of treatment which have been stated relate to any period in the progress of the disease anterior to the time when the dilatation predominates. When this time arrives, the recovery of the predominating hypertrophy is impossible, and the object of treatment which remains, is to retard as much as possible the increase of dilatation, by measures which tend to support the muscular vigor which the heart still retains.

CLINICAL CONTRIBUTIONS.

By John A. Octerlony, M. D., Professor of Materia Medica and Therapeutics and Clinical Medicine in the Louisville Medical College and in the Kentucky School of Medicine, etc., etc.

TWO CASES OF CANCER OF THE STOMACH.

Case I.—James Kelly, age 45, single, born in Ireland; by occupation a laborer; admitted to the Louisville City Hospital on the 8th of November, 1875.

Previous History.—The patient had enjoyed remarkable exemption from disease until the beginning of the illness for relief of which he entered the hospital; indeed, from his account of

himself, he had been strong and hardy as well as healthy. He served 3½ years in the British Army and went through the whole Crimean war. He also served several years in the United States Army, and had spent a considerable time on the plains. At the age of sixteen he contracted a venereal sore on the penis, and according to his own account he took a great deal of mercury at that period and for a good while afterward. Whether this was an infecting chancre or a chancroid could not be made out from his description, but it appears very certain that he never suffered from any constitutional manifestations of syphilis, or from any other severe or protracted disease.

His habits were never bad, though he would at times take somewhat more liquor than is compatible with strict sobriety. There appears to have been no consumption, scrofula or cancer in his family, so far as he had heard or can remember. His father was killed at the age of 46, and his mother died of old age. The grandparents on both sides lived to be quite old.

About the middle of July, 1875, gastric disturbance first began, and consisted only in occasional vomiting after meals. After a while all his meals were rejected, and he vomited solids and liquids alike. There was no pain or nausea, and vomiting, as a rule, occurred from ten to thirty minutes after eating or drinking. He gradually but steadily lost flesh and strength.

Symptoms on Admission.—The patient was admitted November 8, 1875. He was then rather thin, but his complexion was not bad, and he bore no appearance of cachexia. He had no pain but vomited everything ingested. The diagnosis of the physician was chronic gastritis. About three weeks later he came under my charge. On careful examination, a tumor the size of a hen's egg could be discovered in the region of the pyloric end of the stomach. There was dullness in this region under percussion, and the enlargement could be clearly made out by palpation; pressure on it produced a darting pain, which quickly ceased when the pressure was removed. The stomach was greatly distended with gas. I made the diagnosis of a cancer of the stomach, and also expressed the opinion that it was situated in the pylorus.

Progress of the Case.—In the early part of December he

began to suffer from nausea, and the vomiting became more frequent and severe, and occurred not only after eating but when the stomach was empty. He vomited at all hours both day and night, frequently as often as twenty and thirty times in the twenty-four hours.

The matter ejected after eating consisted almost entirely of slightly altered food, while what he threw off when the stomach contained no food was a light brown fluid The quantity vomited each time varied from half an ounce to two ounces. It had almost always a very sour smell and acid reäction. Repeated microscopic examinations yielded only negative results. There were no sarcinæ, and nothing indicating either cancer or ulceration was ever found.

The patient was put on milk diet and was directed to take only a small quantity at a time, but to take this at short intervals.

In the way of drugs, he took lime water with milk, and a teaspoonful of cherry laurel water three or four times daily.

This treatment effected some improvement, but only temporarily. The tumor increased slowly, but perceptibly, and he continued to lose flesh and strength.

In the middle of January, 1876, the symptoms already noted became still more severe and distressing, and for the first time during his illness he began to experience pain in the stomach, lancinating in character and occurring in paroxysms. The enlargement in the region of the pylorus was always referred to by the patient as the source of the pain. Circumscribed peritonitis set in during the latter half of January. This was indicated by tenderness over the enlargement, increase of pain, and vomiting, dorsal decubitus and elevation of temperature, the latter continuing only a few days. From this time there was obstinate constipation, evidently due to some obstruction, the nature and seat of which could not be ascertained. The abdomen became enormously enlarged from accumulation of gas and fæces in the bowels; respiration was proportionately impeded. Emaciation became extreme—the patient's condition in every way most deplorable. He could retain nothing on his stomach, and agonizing abdominal pains became constant.

Puncture with a fine aspirator needle was freely and frequently made, but without much relief of the gaseous distension.

During the last few remaining weeks of his life hypodermic injections of morphia constituted almost the whole treatment; and large and oft-repeated doses were needed to alleviate his pains.

He died on the first of March, 1876.

Autopsy.—The body was very much emaciated; rigor mortis moderate.

Thoracic Cavity.—The cartilages of the first ribs ossified, old and extensive pleuritic adhesions of both lungs. These organs appeared normal, with the exception of some hypostatic congestion. The heart was small and contracted; the valves were normal.

Abdominal Cavity.—There was but a trace of adipose tissue under the skin, and the omentum was almost entirely free from fat. The small intestine was of very dark color and greatly distended with fæces and gas. Cœcum, appendix vermiformis, and ascending colon were enormously distended with fæcal matter and gas. At the point where the bowel turns to the left, and becomes the transverse colon, was a constriction, entirely obliterating the lumen of the bowel, which was here firmly tied down by firm and strong connective tissue, also drawing this part of the bowel downward and inward toward the median line on a level with the umbilicus. The tissues at the point of stricture were indurated and the vessels injected. The transverse and descending colons beyond the stricture were empty and contracted.

The Stomach was empty and contracted, and the pyloric end was displaced downward and lay in close vicinity to the stricture of the colon to which it was tied by firm bands of connective tissue. The whole pyloric end was thickened and of almost gristly hardness, forming a defined protuberance. This condition was more marked over the pyloric valve, and thence extended two and a half inches into the stomach and about one inch into the duodenum. The orifice of the pylorus was so narrowed as to be almost obliterated.

Though this new growth in the stomach evidently corresponded to the tumor which had been detected during life, yet it was much smaller than had been inferred from an examination through the abdominal walls. It had also been observed before the abdomen became so much enlarged that the tumor was slowly getting lower down, so that at last it lay nearly on a level with the umbilicus. This gradual descent could now be explained by attributing it to contraction of the large quantity of connective tissue lying between the stomach and colon, resulting in their approximation; the stricture being firmly bound down, the stomach was pulled toward it.

The gastric mucous membrane appeared normal, except at the pylorus, where it had a slate-gray color.

Dr. W. T. Alexander was kind enough to make a careful microscopic examination of the tissues involved. He found that there was diffuse hyperplasia of the submucous and muscular layers of the stomach. At one point were a few alveoli filled with epithelial cells. It was impossible to demonstrate positively a direct connection between the gastric tubules and these nests. He regarded it as a case of so-called "carcinoma atrophicum"; the cancer nests had doubtless undergone retrogressive metamorphosis, leaving only the hyperplastic submucous layer.

The brain and spinal cord were not examined.

The liver and spleen were normal, with the exception of an old inflammatory adhesion of the anterior border of the spleen to the diaphragm.

There are several points of interest in this case: 1st. Absence of nausea and pain until a comparatively late period; 2d. Gradual descent of the tumor into the abdomen, which could not be explained by its increase in weight and size; 3d. Actual diminution in the size of the tumor, which was explained by the retrogressive metamorphosis of the cancer; 4th. Absence of stercoraceous vomiting in spite of an impervious stricture of long standing. This was explained at the autopsy by the occlusion of the pyloric orifice, which rendered the passage of solids or liquids through the pylorus next to impossible.

CASE II.*—The patient was a woman who, when between thirty and forty years of age, began to suffer from periodical vomiting, unaccompanied by pain or other symptoms.

When she reached fifty, and until her sixtieth year, the vomiting occurred at longer intervals, and during the following decennium it became quite rare. Six years ago hæmatemesis occurred once.

In October, 1874, she first noticed a lump near the navel, and at the same time she began to experience abdominal pains, which extended sometimes upward to the costal arch, and again down toward the symphysis pubis. During the following month (November) vomiting set in, and she could no longer retain any food.

Status Præsens on November 22, 1874.—Patient is much emaciated, and has a pale, yellowish complexion. About two cm. above the navel there is a superficial resistance under the abdominal integuments. No food retained. The vomited matter was of somewhat light color, and contained dark-brownish particles, which sunk to the bottom of the vessel. Reäction with tincture of guaiacum very plain. Under the microscope were seen masses of undigested matter, fat globules and sarcinæ in great abundance She became steadily worse, and died on the 21st of January, 1875.

Autopsy.—On opening the abdomen, a large abscess cavity was found in the thickness of the abdominal wall, whose muscles formed the bottom of the abscess. The cavity extended upward, following the left rectus muscle; about one cm. above the umbilicus the abscess dipped down under the muscle, and came here in close proximity to the stomach, which had been dragged low down in the abdomen, and whose anterior surface was closely adherent to the abdominal wall and to the sheath of the rectus muscle by means of firm connective tissue. At its highest point the abscess presented an opening three cm. in width, through which the finger could with ease be passed into the stomach. The pyloric orifice measured only 1.5 cm. The tissues at the pylorus were dense and hard like bacon-rind, and

*Translated from "Nordiskt Medicinskt Arkiv," 1875.

had a grayish color. About one cm. from this point and on the anterior surface of the stomach was an opening directly into the abscess. Around this opening there was a hypertrophied mass, hard and dense like bacon-rind, involving the whole pylorus. In the centre of the lesser curvature was an old cicatrix; it measured 3 mm., and was surrounded by whitish, radiating connective tissue. The mucous membrane of the stomach presented a slate-colored, coarsely granular appearance. The peculiarity of this case consists in this, that the cancer-growth, instead of involving as usual the liver and pancreas, invaded the anterior abdominal wall, and gave rise to the abscess.

The cancer was scirrhous, with abundant connective-tissue formation; in its alveoli were deposits of epitheloid cells. The cicatrized ulcer had probably been the source of the hæmatemesis mentioned in the history of the case.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

American Medical Association—Twenty-Seventh Annual Meeting.

The Association met at Horticultural Hall, Philadelphia, Tuesday, June 6, 1876, and was called to order at 11 o'clock A. M. by Dr. Wm. Pepper, Chairman of the Committee of Arrangements. A prayer was then offered by the Rev. Dr. Beadle, after which Dr. W. K. Bowling, of Tennessee, introduced the President-elect, Dr. J. Marion Sims, of New York. The latter was supported by the following officers of the Association: Vice-Presidents, Drs. Samuel Lilly, of New Jersey; Ninian Pinckney, U. S. N., and S. D. Seelye, of Alabama; Dr. W. B. Atkinson, Secretary, and Dr. R. J. Dunglison, Assistant Secretary.

Dr. Pepper, on behalf of the Committee of Arrangements,

delivered an address of welcome to the delegates, in which he referred to the attractive medical features of Philadelphia, its sanitary resources, its medical schools and organizations, concluding with a resolution inviting the following gentlemen to seats upon the platform: Surgeon-General William Roth, 12th Corps (Royal Saxon) German Army, and staff—viz., Assistant Surgeon Hans Heymann, 12th Corps (Royal Saxon) German Army, and Dr. Max Brille, Dresden, Germany. Members by invitation: Dr. Wywoodzoff, of St. Pertersburg, of the Russian Commission; Le Docteur Gaffray, representative of the Paris Press to the Exposition; and Surgeon-General J. K. Barnes, U. S. Army.

The reading of the roll of registered delegates was dispensed with, after some discussion, when the Secretary read a letter from Dr. William O. Baldwin, late President of the Association, regretting his inability to be present.

The President, Dr. J. Marion Sims, of New York, then read his inaugural address.

After congratulating the delegates on the privilege of meeting in Philadelphia, in the Centennial year, and joining in the Centennial celebrations, the speaker said that they were standing on hallowed ground—hallowed because the birth-place of a nation. A century was a brief period in the history of nations, but in that time we had increased from 3,000,000 to more than 40,000,000 of people, and had made our mark in science and letters. Although the organization of the Association was conceived in New York, its actual birth-place was in Philadelphia, twenty-nine years ago, its first scientific meeting being in Baltimore in 1848. Formed mainly for the purpose of improving the medical educational interests of America, it had exerted some influence in the direction intended. Although it had failed to meet the ardent expectations of its projectors, it had nevertheless vindicated its claims to the rank of the representative medical Body of the country. It was not, however, due to any want of disposition to effect reforms in medical education that not more was effected. In fact, it had engaged the attention of the Association at every meeting since its formation, and volumes had been written on the subject. Dr. W. O. Baldwin, of Alabama,

President of the Association in 1869, in his inaugural address had ably set forth the defects of the present method of medical education, and had proposed as a remedy the establishment of a great National University, under Government auspices, at the Capital. If the large sum necessary for such a university could be obtained from the Government, its graduates would doubtless rank with those of the best foreign universities. He had felt greatly interested in Dr. Baldwin's scheme, and had been anxious to see it carried out. To this end he had consulted some of the wisest and ablest educationists in the country, and had also taken counsel with some of the great political leaders of the day; but he regretted to say that he had found so little sympathy with the project, that he had been unwillingly forced to let the subject rest in abeyance for the time being. The Harvard method, with a salaried Faculty wholly independent of fees from students, was, in his opinion, the only plan by which a medical degree of any real value could be gained. Five or six hundred thousand dollars given to the Medical Department of the University of New York, or to either of the schools of New York or Philadelphia, properly invested, would yield an annual income sufficient to endow the professorships in said school. This would make the professors independent, and they would not be compelled to graduate young men merely for the sake of the numbers graduated, irrespective of qualification. The University of Virginia was, perhaps, the best training-school in the country, but unfortunately its want of hospital advantages crippled its practical teaching.

In speaking of the practical application of the provisions of the Code of Ethics, he doubted if the latter were wholly up to the present requirements. For instance, he questioned the wisdom of preventing medical patents. He asked why any man should be debarred from taking out a patent for a useful invention, merely because he happened to be a physician. Did the Profession at large, or did the public, derive any benefit by the robbery of the inventor? None whatever. He was simply compelled to give his invention, his time and labor, to enrich the instrument-maker.

Again, the Code of Ethics was violated every day, either will-

fully or ignorantly, not only by the rank and file, but by men high in the Profession; men who were considered leaders, advanced thinkers and workers. How many of those present prescribed chlorodyne, McMunn's elixir of opium, Henry's calcined magnesia, and the Tulu anodyne? Yet they were secret remedies. The prescription of all such remedies was a flagrant violation of the Code of Ethics. But they seemed to condone the act, because usage and interest justified it.

The subject of State medicine was next touched upon as one of the greatest importance, and he remarked that the address of Dr. Bowditch, foreshadowing the practicability of inaugurating a movement of the establishment of a National Health Bureau, commended itself to the attention of the members so far as the initiatory formation of State Boards of Health was concerned.

In conclusion, he alluded to the vexed question of legislation against syphilis and prostitution, condemning the legalization of the latter, and advising all the matters connected with the spread of the disease to be handed over to the Health Boards.

After a vote of thanks had been tendered for the address, Dr. Pepper then announced that the Medical Building, directly behind the Judges' Hall, in the Landsdowne Ravine, would be used as a place of rendezvous for physicians visiting the Centennial.

The times and places of meeting of the sections were next announced.

Dr. Toner, of Washington, moved that 10 o'clock on Wednesday be set apart for the reading of the Address on Surgery.

Dr. Toner called upon the Secretary to read the list of the reports to be presented, which was done. A motion was then made to adjourn until 3 o'clock, and at the same time an effort was made to change the place of meeting to some other hall, but without success. The meeting then adjourned to 9 o'clock on Wednesday.

During the evening the members accepted the invitation of the Committee of Arrangements to a grand promenade concert and supper at Horticultural Hall. The attendance was large and the occasion enjoyable to all.

WEDNESDAY, JUNE 7—SECOND DAY.

The meeting was called to order by the President pursuant to previous adjournment.

The following Committee on Nominations was appointed: Alabama, L. B. Sulze; Arkansas, George T. Hood; California, W. Baker; Connecticut, A. Woodward; Delaware, W. Marshall; District of Columbia, J. Elliott; Florida, G. W. Betton; Georgia, J. P. Logan; Indiana, L. Humphrey; Illinois, T. D. Washburne; Iowa, W. Watson; Kentucky, H. M. Skillman; Kansas, C. V. Mattson; Michigan, A. S. Heaton; Massachusetts, A. B. Hall; Minnesota, E. C. Cross; Maryland, Thomas F. Latimer; Maine, A. B. Snow; Missouri, John T. Hodgen; Mississippi, William Compton; New Hampshire, J. L. Swett; New York, N. C. Husted; New Jersey, S. Lilly; North Carolina, E. Grissom; Ohio, W. J. Scott; Pennsylvania, Traill Green; Rhode Island, L. C. Butler; South Carolina, James McIntosh; Tennessee, John H. Callender; Texas, E. Darnell; Vermont, W. D. Holton; Virginia, J. S. Wellford; West Virginia, J. C. Hupp; Wisconsin, H. P. Strong; U. S. Army, J. R. Smith; U. S. Navy, A. L. Gihon.

The Judicial Council reported that they had decided that the delegates from the Arkansas State Medical Society were entitled to recognition.

Dr. R. C. Kedzie, of Lansing, Michigan, read a paper on Natural Purifiers—Water Supply and Sewerage. He contended that the conditions of water and air were the main if not the only ones upon which the discussion of his subject rested, but the purifier *par excellence* was oxygen.

In conclusion, the gentleman offered the following resolutions, which were adopted:

Resolved, That it is the first duty of States and municipalities—first in importance, and first in the order of time—to make a sanitary survey of the water supply to preserve it against all unnecessary and avoidable contamination.

Resolved, That no municipality should introduce a water system without at the same time providing a corresponding and extensive sewer system.

Drs. Wilhelm Hiorth and H. G. Holst, Medical Directors, Christiania, Sweden, were made members by invitation.

Dr. A. Garcelon, of Maine, read an address on the Progress

of Surgery during the Past Century. He remarked that in 1776 this country was so sparsely settled, and only two cities having a population of over 20,000 inhabitants, that but few men of high scientific attainments could find employment for their skill. Under such circumstances ignorance and empiricism prevailed. A half century later we had made but little progress. The establishment of medical schools and hospitals, and the publication of medical journals, followed the commencement of the present century, and the war of 1812 imparted to them an additional stimulus. Since 1800 the number of these had increased with great rapidity, and the schools now numbered not less than one hundred, besides a large number of preparatory schools. Although many of the graduates of these institutions ranked as the peers of those of any age or country, and as practical operative surgeons they have no known superiors, it was quite evident that the present system of college instruction, if continued, would effectually undermine such a reputation. The lax laws in reference to graduation were next alluded to, and a greater restriction of graduating privileges was earnestly urged.

Dr. Edward Seguin, of New York, made the following report:

For several years the American Medical Association has given its support to a measure of great interest for those who have at heart the advance of physic—namely, the establishment of uniform means of observation, and of medical records, for the physicians of all countries. This action of the American Medical Association has been expressed by the adoption of successive resolutions, and by the sending of delegates charged with the mission of advocating this reform: In 1873, to the British Medical Association, meeting in London; and to the French Association for the Advancement of the Sciences, meeting at Lyons. In 1874, to the British Medical Association, meeting at Norwich; and to the French Association for the Advancement of Sciences, meeting at Lille. In 1875, to the International Medical Congress, meeting at Bruxelles. In 1876 (next September), the same Congress will meet in this very place; and now the American Medical Association is called to decide what position it will assume in this matter.

Will it recede from its former position, and leave the task to second-hand promoters, or will it continue its initiative before the International Council? This is not only a question of pride for the Association; it is also one of justice due to the American physicians at large. If the constitution and by-laws of this Association prescribe an annual transfer of its meetings from one part to another of this vast country, it is to give us opportunities to study and express the wants of the whole Profession. Of these wants, none has been found more deeply felt than the one of partaking, as givers and receivers, in the discoveries of our art. But this want is not ours alone, it is universal: and the American Medical Association will deserve the thanks of all for having planned, and carried into execution, the most important instrument of internationalization of medical progress.

Therefore the Association resolves to charge its delegates of former years to continue to advocate the uniformity of means of observation before the various medical societies, and particularly at the next International Medical Congress, and report next year what success they will have met.

Drs. Seguin and Bowditch were appointed additional delegates to the International Congress.

The report of the Treasurer showed that there was an unexpended balance of $4,577.07 in his hand to date.

The report of the Committee of Publication stated that of the volume of the Transactions for 1875, nine hundred and fifty copies were printed, at an aggregate expense of $2,000. Of these, eight hundred and eighty-three copies have been distributed to members, twenty-eight to medical journals and societies, leaving thirty-nine on hand.

The report of the Librarian stated that during the past year there had been added to the library 124 distinct titles, exclusive of yearly volumes of transactions of societies, reports of hospitals and boards of health, and volumes of medical journals, where these have been previously catalogued as distinct titles. This addition makes the library consist at present of 630 distinct titles, which comprehend 1,514 volumes, including pamphlets.

The report of Dr. C. C. Howard, delegate to the Brussels International Medical Congress, held in September last, was presented, and referred to the Committee on Publication.

A sketch, prepared by Professor Hales, of the life of Dr. Armsby, of Albany, N. Y., was, on motion, referred to the Committee on Publication.

The meeting then adjourned until 9:30 A. M. on Thursday.

The afternoon was occupied in the meeting of the different sections.

In the evening a lecture was delivered by Professor George F. Barker, M. D., of the University of Pennsylvania, on the "World of the Seen and the Unseen." After explaining some of the phenomena connected with optical delusions, and showing how scientific investigation was passing into a field where the senses were absolutely insufficient to search, the lecturer gave a number of illustrations, showing the methods of investigation into matters beyond the reach of the senses, as sound and light, many of which were very beautiful, and elicited great applause.

THURSDAY, JUNE 8—THIRD DAY.

Horticultural Hall having proved inadequate to the requirements of the meeting, Kiralfy's Alhambra Palace was selected for this morning's session. The meeting for this day was accordingly called at that place, and commenced, pursuant to previous adjournment, at 9.30 A. M., President Dr. J. Marion Sims in the chair.

On motion, the resolution of the day before, that all persons whose names are at present on the roll shall be voted members, was reconsidered, and it was agreed, after some discussion, that the roll of members, amounting to some 730 names, be called. In accordance with this desire the Secretary began calling the roll, and continued to do so until 10 o'clock, when the hour arrived for the reading of the address on Obstetrics, by Dr. S. C. Bussey, of Washington, D. C.

On the conclusion of the reading, Dr. J. L. Atlee moved that the address be referred to the Committee on Publication, for publication, and discussed at the next meeting of the section on Obstetrics. Adopted.

The effort was then again made to do away with the reading of the roll, but unsuccessfully. The motion occasioned considerable discussion.

On the reading of the roll, at the name of a delegate from the State Society of Michigan, the delegate was objected to, as coming from a society against which charges were pending. At this juncture the report of the Judicial Council, signed by Dr. Benham, Chairman, recommending that the delegates from Michigan State Society be received, was presented. The report was applauded, and the reading of the roll was continued.

At the name of Dr. Thomas J. Griffith, of Louisville, an objection was made that he was not nor had not been present, and the Secretary was requested to strike his name from the roll if the objection should be found, on inquiry, to be well founded.

On the reading of the name of Sarah Hackett Stevens, representing the Illinois State Society, Dr. Brodie, of Detroit, moved that that and all such names be referred to the Judicial Council. A motion that this resolution be laid upon the table was carried by a large vote, amid considerable applause.

The President asked if the vote was intended to recognize her right to a seat, when loud cries of "Yes," and cheers, emphatically answered the question.

Dr. Toner, of Washington, moved that the roll as read be confirmed, with the exception of the objections taken.

A resolution providing that it was not derogatory in any physician to take out a patent for a surgical instrument of any kind, was referred to the Judicial Council.

Dr. Keller, of Kentucky, on behalf of the trustees of the fund for a monument to the late Dr. McDowell, of Kentucky, reported a recommendation for an increase of one dollar each year in membership dues, the amount thus raised to go to said fund.

Dr. Toner stated that the resolution so recommending would have to lay over one year, under the rules. He hoped, however, that the rules would be waived for this purpose by unanimous consent.

Objection was raised, and a motion to lay the resolution on the table was agreed to.

Dr. Toner moved that $1,000 be appropriated out of the funds of the Association for the McDowell fund.

Dr. Howard moved the point of order, that it was a rule of the Association that no new business should be transacted except on the first and fourth days of the session of the Association, and hoped that the rules would not be departed from. The Chair decided the order well taken, and the motion of Dr. Toner was declared out of order.

Dr. Sims said he was as anxious as any one to secure the money asked for, but after conversation with gentlemen around him he was satisfied the subject could not be discussed to-day. The Association would have to defer action until to-morrow.

Dr. Henry A. Martin, of Boston, moved that a committee be appointed by the Chairman to take into consideration the subject of bovine vaccination as compared with the usual arm to arm practice, to report at the next annual meeting. The motion was adopted, after which the Association adjourned at 9.30 A. M. on Friday.

The sections held their usual meeting in the afternoon and completed the business before them.

The evening was spent on the part of the members in responding to invitations to the receptions of the following Philadelphia physicians and surgeons; Dr. D. Hayes Agnew, J. Solis Cohen, Louis A. Duhring, H. Lenox Hodge, John H. Packard, William H. Pancoast, William Pepper and Ellwood Wilson.

FRIDAY, JUNE 9—FOURTH DAY.

The closing session of the Association was held in Horticultural Hall, and was called to order by the President at 9.30 A. M.

A charge against the State Society of Illinois was referred to the Judicial Council.

Dr. Toner, of Washington, offered the following, which was unanimously adopted:

Resolved, That members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine, are deemed thereby to violate the spirit of the ethics of the American Medical Association.

Dr. W. B. Atkinson, the Secretary, presented a report which stated that in obedience to the resolution adopted at the session of 1875, he reports that in reply to his inquiries he is informed

that Boards of Health exist in Alabama, California, Georgia, Massachusetts, Michigan, Minnesota, Virginia, and Wisconsin. He had written to the Governors of Delaware, Indiana, Iowa, Nebraska, New Jersey, New York, South Carolina, Texas, and Vermont with almost negative results.

Dr. H. C. Wood, of Philadelphia, offered the following, which was adopted.

Resolved, That a committee of three be appointed by the Chair to obtain from Congress an appropriation for the publication of the subject catalogue of the National Library, and that the State Societies are requested to take such action as may be deemed fit to further said object.

The Nominating Committee next presented the following report through their chairman, which was duly adopted:

President, Dr. Henry J. Bowditch, of Massachusetts; Vice Presidents, Dr. N. J. Pittman, of North Carolina; Dr. Franklin Staples, of Minnesota; Dr. Joseph R. Smith, of U. S. Army; Dr. Samuel C. Busey, of Washington, D. C.; Treasurer, Dr. Casper Wistar, of Pennsylvania; Librarian, Dr. Wm. Lee, of District of Columbia. Committee on Library, Dr. Johnson Eliot, of District of Columbia; Assistant Secretary, Dr. J. H. Hollister, of Illinois. Committee of Arrangements, Drs. N. S. Davis, J. W. Freer, H. A. Johnson, T. D. Fitch, H. W. Jones, Joseph P. Ross, Leslie Curtis. Committee of Publication, Dr. W. B. Atkinson, chairman; Dr. T. M. Drysdale, Albert Fricke, Samuel D. Gross, Casper Wistar, Richard J. Dunglison, all of Pennsylvania; and Dr. Williams, of District of Columbia.

Next place of meeting—Chicago, Ill.

Time of meeting—First Tuesday in June, 1877.

Judicial Council.—Drs. N. S. Davis, of Illinois; E. L. Howard, of Maryland; W. O. Baldwin, of Alabama; H. W. Dean, of New York; A. N. Talley, of South Carolina; J. P. Logan, of Georgia; and D. W. Stormont, of Kansas, in place of the seven whose terms expire at this meeting. The rest of the of the present Council continue.

Committee on Prize Essays.—Dr. N. S. Davis, Illinois, chairman; Edmund Andrews, E. Ingalls, Moses Gunn, E. P. Cook, all of Illinois.

Special Committee on Influence of Climate in Pulmonary Diseases in Florida.—Dr. E. T. Sabal, continued.

Delegates to the International Medical Congress to be held September 4th, 1876, at Philadelphia: Drs. H. I. Bowditch, Massachusetts; E. Seguin, New York; Thomas L. Maddon, Iowa; J. S. Welford, Virginia; A. Dunlap, Ohio; John T. Hodgen, Mo.; Joseph Carson, Pa.; John C. Dalton, N. Y.; W. O. Baldwin, Ala.; D. W. Yandell, Ky.; N. S. Davis, Ill.; Austin Flint, Sr., N. Y.; T. G. Richardson, La.; W. F. Westmoreland, Ga.; A. M. Pollock, Pa.; Frank Hastings Hamilton, N. Y.; G. M. Bemiss, La.; L. A. Dugas, Ga.; Francis Bacon, Conn.; Hunter McGuire, Va.; A. G. Shortleff, Cal.; E. M. Moore, N. Y.; O. W. Holmes, Mass.; G. A. Otis, U. S. Army; F. E. Gunnell, U. S. Navy; E. C. Harwood, of New York.

On the motion of Dr. J. L. Atlee, of Lancaster, the salary of Dr. W. B. Atkinson, the permanent secretary, was made $1,000 for the past year.

Dr. Bell, of Iowa, offered the following, which was adopted:

Resolved, That there be appointed a committee of three persons, members of this Association, in each of those States where there has been no action taken for the establishment of Boards of Health, to urge upon those States the necessity of the establishment of such Boards.

A communication was read from the Centennial Commissioners from Victoria, asking information as to the list of medical colleges in good standing in this country. A motion was made to refer it to the Judicial Council.

Dr. Busey said the Judicial Council did not have the right to determine the standing of any college.

Dr. Frothingham, of Michigan, said the quarrels about the colleges were a disgrace to the Profession.

On motion of Dr. Toner, the whole matter was laid on the table.

The newly-elected President, Dr. H. I. Bowditch, of Massachusetts, was then conducted to the chair, and Dr. Sims, the retiring President, delivered his farewell address. He said the work transacted during the past three days would exhibit to science a record of progress greater than ever before. At this meeting many familiar faces had been missed. Francis Gurney Smith, who had served them long and faithfully, was abroad to recuperate his shattered health.

The absence of so many of our Southern brethren was not due to any lack of interest in the proceedings. He thanked God that the day of strife had been passed, and passed forever. Where there had been bitterness and hate, now there was kindness and affection. What higher proof could there be of this than the election of a man educated at the South? At this time Massachusetts and South Carolina can join hands. (Dr. Sims then clasped the hand of the newly-elected President, Dr. Bowditch, the act being received with shouts of applause.)

Dr. Bowditch then addressed the Association, and said the place had sought him and not he the place. He deemed it a special honor to occupy the position in this centennial year. In conclusion, he returned his sincere thanks.

Dr. Grissom, of North Carolina, thanked Dr. Sims for his remarks.

Dr. E. R. Squibb, of Brooklyn, N. Y., remarked upon the practicability of revising the Pharmacopœia, after which he offered the following, which were adopted:

WHEREAS, The usual time for a decennial revision of the United States Pharmacopœia is drawing near; and

WHEREAS, The plan of revision and publication in force since 1820 may not now be the best that could be devised; therefore be it

Resolved, That the American Medical Association take the whole subject of a National Pharmacopœia into consideration for a revision of its management, and for the present time, with especial reference to the following questions:

First. Whether the present plan of decennial revision and publication be practically sufficient for the needs of the Materia Medica and Pharmacy of the present time, and, if not sufficient, whether a plan could be devised which might offer probable advantages enough to justify an attempt to disturb the present one.

Second. Whether this Association be the proper custodian in this country of the interests involved in the National Pharmacopœia; and if it is the proper source of the National Codex, whom can it invite to coöperate with it in the work?

Third. If it be a work for this Association, in what way can its details be wisely undertaken with any prospect of material improvement upon the present plan?

Resolved, That in order to facilitate mature and general deliberation upon

so important a subject, the final discussion of these resolutions be laid over at least one year; and that the matter be recommended to the President of the Association for consideration in his annual address for the meeting of 1877.

On motion, the thanks of the Association were returned to the Messrs. Kiralfy, proprietors of the Alhambra Theatre, for the loan of their beautiful building on Thursday.

The Association then adjourned *sine die*.

[*Medical Record.*

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, June 21, 1876.

Dr. E. S. Gaillard:

Dear Sir,—Dr. George H. Fox has read a report on the Topical Use of Thin Bibulous Paper in Affections of the Skin and Mucous Membranes before the Medical Journal Association. This paper is of two varieties, the French and the Japanese, each being peculiarly adapted for certain purposes. The French is partially of vegetable and partially of woollen texture, and is readily reduced to a pulp by moisture, of which it absorbs about five times its own weight, and much more rapidly than lint. It was suggested as a substitute for the latter, as being equally serviceable in every respect, and costing only about one-fifth as much. Besides absorbing more rapidly than lint, it has the advantage of being much more easy to remove. It was especially recommended, therefore, in the treatment of venereal sores, which could be kept perfectly clean and healthy by changing this paper-dressing frequently. In skin affections in general it might not be of very great service, but had been found to be exceedingly useful in eczema of the breast during lactation. In the cleansing of wounds and bleeding surfaces, it was recommended as a substitute for sponges, as it could not be used a second time, and there was, therefore, no danger of its carrying contamination to other patients. It was capable of being medicated to any extent with carbolic acid, the persul-

phate and perchloride of iron, and other useful agents. It was furthermore suggested to employ it for the absorption of the menstrual discharge, and as a substitute for the ordinary pocket handkerchief by those suffering from nasal catarrh. The Japanese variety did not reduce to a pulp when moistened, but when rolled up into cylinders was quite tough, and it could, therefore, be inserted in this shape into sinuses, the nasal passages, the urethra, and other similar canals.

At the same Society, Dr. Eugene Dupuy, recently of Paris, and the former associate of Brown-Séquard in many of his original investigations in regard to the nervous system, has read a learned and able paper on the Physiology of the Brain, in which he gave the most recent views of the most distinguished authorities on the subject, and related in detail a number of his own experiments. His arguments seemed to militate against the strict localization of the various functions of the brain, and he stated that repeated instances had been recorded of clot in the corpora striata without resulting loss of motion, and in the optic thalami without loss of sensation.

It is rather a curious coïncidence, that on the very day upon which Prof. Peaslee read his caustic paper before the Academy of Medicine, on Excision and Discision of the Cervix Uteri, in which he so strenously protested against the almost indiscriminate mutilation of the uterus, now so much in vogue. An article appeared in the June number of the "American Journal of Obstetrics," describing an operation, which, for reckless slashing of that much abused and long-suffering organ, quite eclipses anything of the kind which has been brought to the attention of the Profession for a long time. The article is on the subject of Retroflexion, and is by Dr. William Lennecker, of Chicago, who thus describes his surgical treatment of the deformity. "An exact survey of the curve of the uterus is taken by the lead or rubber sound. One blade of the scissors is passed into the cervix until the outside blade reaches the angle of reflection of the vagina, and the part intervening between the blades divided by a single stroke. The opposite side of the cervix is then similarly treated. Having been bent to the exact curve of the uterus, as ascertained by the lead sound, knife No. 1 is

taken, and the anterior wall of the uterus up to the fundus, slit open. I now take knife No. 2, after being bent to the exact curve of the uterus, and slit open the right side, and then repeat the operation in the same manner with knife No. 3, on the left side."

We confess ourselves somewhat puzzled by the expression "slit open." Does an author mean us to understand that he cuts clear through the substance of the uterus into the cavity of the peritoneum, thus dividing the organ into three several segments or slices with his three incisions? Such, it seems to us, would be a legitimate interpretation of the phrase "slit open;" and yet, from the fact that he states that two or three of his patients bore children after having undergone this operation, it is altogether probable that he does not carry his carving to quite such a savage extent as his language would imply. Would it not be a good idea to send a few copies of Dr. Peaslee's paper to Chicago to remind the eager enthusiasts of that enterprising municipality that conservative ideas on this, as well as some other subjects, may still be entertained by men of respectability and experience in the Profession?

Dr. Hart, "the chronic hospital man," has recently had a grand concert given in aid of the proposed institution, and in order to facilitate the sale of tickets for the same, he distributed broadcast over the city a vast number of circulars, in which he actually had the effrontery to publish extracts from the impudent and outrageous paper which formerly created such a storm of indignation at the Medical Journal Association, together with the signatures which he inveigled the respectable members of the profession into appending to his proposition for a hospital. The character of these extracts may be inferred from the fact that the first one is headed "The Imbecility of Modern Practice."

There seems no end to the formation of new societies. The latest is the American Gynæcological Society, which was organized in this city during the present month. It seems to have been gotten up on the same plan as the Neurological Association, and is intended to embrace in its membership only the most distinguished gynæcologists throughout the country.

Fordyce Barker was elected President, and Drs. W. L. Atlee and W. H. Byford, Vice Presidents. The Council consists of Drs. Marion Sims, G. F. Lyman, Wm. Goodell and T. Parvin.

Mr. Bishop's successful exposure of the artifices and trickery of Spiritualism has now been repeated, and to a crowded house, as before. As a result of this movement, the Society for the Reformation of Juvenile Delinquents has applied to the Supreme Court for an order requiring Mrs. Anna Eva Fay, the spiritualist, who has been making considerable money at her seances, in the capacity of a "celebrated indescribable phenomenon," to take out a license as a professional juggler.

During the past winter and spring quite a number of musical and other entertainments have been given in the large amphitheatres of both Bellevue and Charity Hospitals, for the amusement of the convalescent patients; which were gratefully appreciated by the recipients of the favor, and reflected the greatest credit on those who were kind enough to offer their services for so disinterested an object.

The Board of Health have passed the sensible regulation that the Registrar of Vital Statistics shall be directed to notify the families of persons who die from such contagious diseases as small-pox, scarlet fever and diphtheria, that the Health Authorities deem a church ceremony or public funeral in cases of this character, dangerous to the lives of those who attend. There is no doubt that if this warning would only be generally heeded, one very frequent agency for the spread of these affections would be removed. Faithfully yours, STAR.

PORTLAND, MAINE, June 22, 1876.

Dr. E. S. Gaillard:

Dear Sir,—I have just been looking over my article in the June number of the "Richmond and Louisville Medical Journal, and find some mistakes, which I wish you would have corrected in the next number.

On pages 518 and 519 I find several words which were changed from that in the manuscript; but the worst change occurs on page 519, ninth line from the bottom, where, for "opicula," there is put spicula.

On page 520, sixth line from top, the comma should be after deafness, and none after practice.

I really know a case where homœopathic pills alone were administered for the reduction of paraphimosis.

Yours very respectfully, THOMAS RAINEY, M. D.

CHEMISTRY AND PHARMACY.

"Diruit, ædificat, mutat."—HOR.

Power of Steam.—There has been a good deal of discussion of late in English journals with regard to the highest speed attained on the English railways. The "Engineer" says that the following are the most remarkable authentic instances it knows of high speeds: "Brunel, with the Courier class of locomotive, ran 13 miles in 10 minutes, equal to 78 miles an hour. Mr. Patrick Stirling, of the Great Northern, took, two years back, 16 carriages 15 miles in 12 minutes, equal to 75 miles an hour. The Great Britain, Lord of the Isles, and Iron Duke, broad-guage engines on the Great Western Railway, have each run with four or five carriages from Paddington to Didcot in 47½ minutes, equal to 66 miles an hour, or an extreme running speed of 72 miles an hour; the new Midland coupled express engines running in the usual course have been timed 68, 70, and 72 miles an hour. The 10 A. M. express on the Great Northern, from Leeds, we have ourselves timed, and found to be running mile after mile at the rate of a mile in 52 seconds, or at 69.2 miles an hour. The engines used are Mr. Stirling's outside cylinder bogie express engines, the load being 10 carriages.—*Bost. Jour. of Chem.*

Circular Crystals.—An interesting paper was read at the last meeting of the Royal Society of Edinburgh, by Mr. Dallas, on circular crystals. The author remarked that notes on this phenomenon had been seldom communicated. Sir D. Brewster had been able to get such crystals of only microscopic dimensions,

but some time ago he (Mr. Dallas) had found that by crystalization by means of gum arabic, circular crystals of much greater size were formed. This took place with certain salts, but not with all that he had tried; among the more successful were sulphate of copper, binacetate of lead, muriate of morphia, and other similar salts.—*Ex.*

The Drainage of Jerusalem.—The Pool of Bethesda is not precisely a "fount of healing" in our day, according to a recently published report by Sir Moses Montefiore on the condition of the Jewish inhabitants of the Holy Land, from which the following is an extract: "I had some conversation on the subject of general drainage in Jerusalem with a gentleman of authority; he told me that all the refuse of the city is now carried into the Pool of Bethesda, which, strange to say, I was informed, is close to the house intended for the barracks, and the soldiers living there appear not to experience the least inconvenience on account of its vicinity. If arrangements could be made to clear that pool entirely, to admit pure water only, and to dig special pools for the purpose of conducting there the city drains, Jerusalem might become free from any threatening epidemic. All the doctors in Jerusalem assured me that the Holy City might be reckoned, on account of the purity of its atmosphere, one of the healthiest of places."—*Bost. Jour. of Chem.*

Wm. R. Warner & Co.—It will be a pleasure to all who take an interest in American pharmaceutical products, to learn that Messrs. W. R. Warner & Co., whose advertisement in this Journal is so familiar to its readers, have been awarded the Chilian's World's Fair prize medal, for the superiority and perfection of soluble sugar-coated pills. This firm, since its removal into large and more commodious warehouses, is giving increased evidences of its enterprise and success.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—*Lectures on Syphilis, and on some forms of Local Disease affecting principally the Organs of Generation.* By HENRY LEE, Professor of Surgery at the Royal College of Surgeons of England, Surgeon to St. George's Hospital, Hon. Fellow of King's College, etc.

These lectures, recently published in book form, contain valuable information. They are papers of great merit, and deserve more consideration than has been given to them in any of the notices or reviews. The book is especially to be admired, for the reason that it is based upon the too much neglected doctrines of John Hunter, matured by that thorough analysis peculiar to himself, and which have never been excelled.

In the discussion of Syphilis before the British Medical Society, in the year 1872, in which Ricord, Acton, Lord, and S. D. Gross, took part, it was the opinion of the leading Medical Journals all over the world, that the distinguished gentlemen directed their attention solely to the treatment, without throwing much light on the pathology of the disease. And in the same connection some of those critics remarked, that we had learned but little of the pathology of syphilis since the investigations of John Hunter. The world certainly owes a lasting debt of gratitude to Ricord for the original classification in this department, as well the treatment; yet it is beyond dispute that John Hunter did most in establishing the true pathology of syphilis. The author also calls attention to some of Pearson's views, which he thinks are too valuable to be forgotten.

The chief peculiarity of the lectures, and the one in which they differ from most of the standard authorities, is in treating of the inoculability of the blood in its various forms and conditions, "both in primary and secondary syphilitic manifestations." "The morbid processes produced by such inoculations, the modifications of those processes in patients previously syphilitic, primary and secondary syphilitic diseases of the mucous membranes, and their liability to communicate constitutional syphilis," are very clearly set forth, and as the lecturer thought-

fully asserts, these subjects "are not dwelt upon in the systematic works of other English authors of the present day." None of our modern writers have so forcibly discussed the inoculability of the blood, and the various secretions from subjects of constitutional syphilis. It is satisfactorily proven that the blood, or any secretion from such patients, contains the inoculatory principle or power as certain as the pus from a Hunterian chancre. This is a subject of the greatest importance, and is worthy of the gravest consideration. If the liability of inoculation from secretions of persons afflicted with constitutional syphilis was properly understood and appreciated by the Profession, more caution would be used in giving advice on the subject of marriage. The intelligent Doctor would know that he held in his hand not only the power of life and death, but the responsibility of bringing into existence a living death, worse than death itself, and would govern his advice accordingly. What physical pain, what mental torture, what blighted lives and blasted hopes might be avoided if the Profession was able to give sound advice on this important subject? What an enormous crime, committed on an unborn child, to bring it into the world bearing in its very vitals the seeds of pain and sorrow, whose life will be a burden, unfitting it for either useful labor or pleasure, and whose only mission would seem to be to infect the people like an Egyptian plague? What an awful reflection, to feel that through the carelessness or incapacity of the medical profession this hydra-headed monster, Syphilis, had been allowed to spread itself God only knows where, in the ages to come, not only carrying misery to individuals, but stopping the wheels of progress in the intellectual advance of nations. Many of the best authors not properly comprehending the subject, have caused their followers to make sad mistakes in giving advice regarding matrimony, where the parties are laboring under poison of constitutional syphilis. The test relied on by Mr. Lee, as to whether the patient is cured, or can marry with safety, is the condition of the glands of the groin. He states very positively that his experience assures him in asserting that the enlargement of the inguinal glands can be safely relied on as proof of the presence of syphilis. The teachings on this

point and the illustrations given are highly instructive and useful. An imperfect reading of Hunter's work on Venereal diseases has led many to claim that he did not believe in the inoculability of the human system by constitutional syphilitic poison, but it is shown that he did believe in its transmission. Our author says, "some of Hunter's expressions might lead to the conclusion that the secretions from the secondary syphilitic affections were not inoculable." He mentions, however, that it was asserted in his day that ulcers in the mouths of children derived from constitutional and hereditary disease produced the same disease upon the nipples of the women who suckled them. That is, the children were contaminated either by their mothers or fathers; the child received the disease by hereditary descent; and the nurse was infected by the child. "If it were possible to contaminate once in this way, it would be possible to contaminate forever." He also says: "And as we shall find hereafter in the history of the disease itself that no constitutional effect of this poison can be communicated to others, we are led of necessity to the conclusion that its first effects were local." These contradictory statements by Hunter on this important subject must show to any unprejudiced mind that he considered transmission of syphilis an open question. The first observation was a fact which had been noticed by his contemporaries, while the last was a theory he recorded in attempting to account for the origin of the disease. Mr. Lee very properly says, that "the cases referred to by Hunter viewed in the light of more recent observation, show conclusively not only that the product of constitutional disease may be communicated, but that the blood itself may be the means of imparting it." The lectures give instances of inoculation of syphilis by means of the lancet, through a blistered surface and by the transplanting of teeth. They also contain a strong series of cases of inoculation by vaccination. Twenty-three children were infected in this way in the practice of Dr. Marone, at Lupara, in Molise. The vaccine matter was mixed with a little blood, and he supposed it was through this medium that the syphilitic poison was communicated. Many of these children infected the breasts of their mothers, and the consequences were sad indeed. A

devoted mother has her child vaccinated to protect it from a loathsome disease, and by that very means it not only becomes infected with another, still more horrible, but conveys the disease to her and her future posterity, with all its concomitants of pain and misery. These are results too awful to admit of neglect or incompetency on the part of our Profession, and should impress upon all the necessity of using pure lymph unmixed with blood or other foreign matter. A perusal of this portion of the book is very essential to the practitioner, and will prove interesting to the general reader.

It is also explained how Hunter confounded syphilis and gonorrhœa. He says: "Now, I have long noticed a peculiar urethral discharge which differs in its nature and symptoms from ordinary gonorrhœa. It occurs not unfrequently in patients suffering from symptoms of constitutional syphilis, who have not exposed themselves to any fresh infection, and it also precedes and accompanies well-marked primary disease in those who have." It was this discharge from the urethra in persons laboring under constitutional syphilis which Hunter mistook for gonorrhœa. He inoculated himself and others with it, and he had constitutional outbreaks of the disease lasting three years. It was evident that the person from whom he inoculated himself had constitutional syphilis, and the effect in his own case did much to strengthen his belief in the identity of the two diseases. That he was in error in this view is very satisfactorily explained. Mr. Lee also elucidates what has often been observed by practitioners, that young men have contracted syphilis sleeping with only one woman, and on examination no local manifestation of the disease could be found. In such cases the poison is imparted by a vaginal secretion from the woman affected with constitutional syphilis. Other instances are also cited of men marrying with no apparent indication of the disease, but who are still under the influence of the poison, and subsequently infect their wives by means of this peculiar urethral discharge. As before stated, the test relied on as to the presence of syphilis is the enlargement of the inguinal glands.

The lecturer very correctly assumes: "That Hunter was

right in saying that a urethral discharge might be inoculated so as to produce constitutional syphilis; that Ricord was right in pronouncing ordinary gonorrhœa a non-syphilitic disease; that Hunter was wrong in so far as he claimed that the secretion of ordinary gonorrhœa could be inoculated so as to produce syphilis; that Ricord was wrong in concluding that no urethral discharge which did not proceed from a chancre could be so inoculated, and that they both erred in supposing that the secretions of syphilitic manifestations, including certain forms of urethral discharge, could not be inoculated so as to produce syphilis upon another person not previously infected." To Ricord is due the establishment of the fact that the discharge of ordinary gonorrhœa is non-syphilitic, correcting a then existing error of Hunter; but he himself was wrong in teaching that no urethral discharge which did not come from a chancre could transmit syphilis to another person. Hunter's mistake in supposing that syphilis and gonorrhœa were allied diseases is very plainly proven. The author shows from his own clinical experience that there is a peculiar urethral discharge sometimes attending both primary and secondary syphilis, and that those cases in which Hunter succeeded in producing syphilis by inoculation with it were from syphilitic subjects. With very few exceptions, the lights of modern science go to prove that Hunter's doctrines were in the main correct.

A careful study of the work will enlighten the Profession on many important points which have not received sufficient attention from modern writers. It fills a gap in the teaching on its subject, and is much needed. It revives the doctrines of the great John Hunter, which, though in some respects crude and irregular, subsequent progress and investigation have shown to be supported by the eternal rocks of truth. Mr. Lee is proud to acknowledge himself an humble disciple of John Hunter, and the finishing touch given to his work after the lapse of near a hundred years by the gifted and scholarly ability displayed in this little book, shows how well-founded were the doctrines of the great master.

Buckle, in his History of Civilization in England, says: "For comprehensive and original genius John Hunter comes

next after Adam Smith, and must be placed far above any other philosopher whom Scotland has produced. His powers were so extraordinary, that among the great masters of organic science he belongs to the same rank as Aristotle, Harvey, and Bichat. As a physiologist he was equaled or perhaps excelled by Aristotle, but as a pathologist he stands alone, if we consider what pathology was when he found it and what it was when he left it. It is now admitted that we may trace to him nearly all the surgical improvements which were introduced within about forty years after his death, and doctrines which he advocated, and which were then ridiculed as whimsical novelties, are now taught in the schools, and have become part of the common traditions of the medical profession. His English contemporaries regarded him as an innovator and enthusiast, and in his advanced position of thought he stood in solitary and comfortless superiority."

That Hunter lived a century before his time there can be no doubt. His genius, which led him to depend for proof of his doctrines on facts in the interrogation of nature, carried him out of sight in advance of his contemporaries, so that in the blindness of ignorance they looked contemptuously upon the products of his mighty mind. But Time, the great arbiter of all things, has done him justice, which though tardy, is none the less sincere, and his fame receives new impetus and gathers new laurels with each revolving year, and must continue forever the crowning glory of medicine and surgery.

The book contains nothing specially new in the treatment of syphilis. In the use of mercury, preference is given to the mercurial bath. Langston Parker's method of administering the bath is to some extent improved. The correct view is taken, that mercury often fails to produce the proper effect, for the reason that patients are too much exposed to cold and damp weather. In this particular the author agrees entirely with Pearson, who advocated mercurial inunction, and urged specially that patients should be confined to warm rooms during treatment. Much censure is placed upon the neglect of this precaution at the present day, the action of the mercury being prevented or retarded by exposure to the atmosphere.

The mode given for administering mercury is as follows:

"A lamp, in which the methylated spirits of wine is burned, is put into a case, made principally of wire gauze, on the principle of the Davy safety-lamp. The top of the case is fitted with a central, movable, small circular plate, surrounded by a trough, which should contain one ounce of water only. The water should be boiling when first put in, or should be allowed to remain over the lamp until it begins to boil. Thirty grains of re-sublimed calomel are then spread out on the central small circular plate. This should be quite dry. The patient then sits, without his clothes, on a small stool or chair, and the lamp is placed between his legs. A cloak made of moleskin or some thick material is then made to cover the whole apparatus, and is tied around the patient's neck. It is important that the cloak should go quite down to the ground all the way round. As the water boils a certain quantity of steam is enclosed within the cloak; and a little later the vapor of the calomel, as it rises, passes through the steam and becomes mixed with it. The water first disappears, and the calomel is sublimed in from ten to fifteen minutes. The patient then gets into bed with the cloak on, so as to make it his night dress. In this way the calomel is necessarily kept on the surface of the skin. The cloak used is furnished with a cane hoop, so as to be kept away from the skin during the action of the bath, and this hoop may be removed as soon as the bath is over, and replaced again before the bath is used the next night. The cloak has a slit in front, which the patient is directed to open for about an inch, so as to allow some of the vapor to escape. This rises in front of his mouth and nose, and he is directed to inhale it for a minute, at the expiration of each five, during the continuance of the bath, so as to breathe the vapor for about three minutes altogether. The patient, during this time, keeps his head up, so that the moistened calomel vapor passes for about six inches through the common air before it is inhaled. This inhalation is not always necessary, but it furnishes a means of regulating, with greatest nicety, the action of the mercury, as indicated by its effects upon the gums. I have never found mercury administered in this way produce salivation where patients had not also taken it in some other form. The action is upon the surface of the

body, and the internal parts are comparatively unaffected. No diarrhœa is produced except from some accidental cause. The stomach and intestines are not irritated, and are free for the use of food or medicine. The perspiration produced amounts only to a slight moisture on the skin, and when this is the case the patient very rarely experiences any debilitating effects from the continued use of the bath. During this treatment, I generally recommend patients to abstain from taking vegetable acids; and for this purpose, as a rule, they are told not to eat raw vegetables or raw fruits, such as salads, cucumbers, celery, apples, peas and oranges. As the object is to have the calomel in contact with the skin, the patient washes only as much as may be necessary. Boerhaave long ago made the observation, that if patients went about their usual occupations and followed their usual pleasures he could not cure them; and Pearson, as has been stated, found that under any plan of treatment, if the patients were much exposed to cold air, the effect of his remedies was materially interfered with. This will be the case with regard to any plan of treatment by which there is a fair prospect of curing the disease. I know how often it has been asserted that the disease is not cured, but a long experience now enables me to say very positively, as I have before remarked, that numbers of patients, after having gone through a proper course of treatment, pass five, ten, fifteen or twenty years, without any fresh manifestations. They believe themselves to be cured, and whatever impression may be left upon their constitutions, no inconvenience subsequently arises, either to themselves or their families. In this sense, then, syphilis may be cured, as well as any recurrent fever to which the human body is liable."

It is somewhat surprising that Mr. Lee seems not to give proper appreciation to the advantage of elimination in the treatment of syphilis, that is, he does not give sufficient consideration to warm bathing, followed by friction of the body. While it is generally agreed that mercury is the only true antidote to syphilitic poison, it is yet well known that much good is accomplished by exciting elimination through that great emunctory the skin.

There are many valuable suggestions contained in the book

which can not be embraced in the limits of a cursory review. A patient imperfectly cured of constitutional syphilis, and afterwards contracting gonorrhœa, may keep up the ordinary treatment for weeks and months without success, when, if the true state of things was comprehended, and a mild mercurial course instituted, the disease, in a reasonable time, would disappear. This is only one of many such instructive lessons given which render it highly useful.

These lectures are eminently worthy of the attention of the Profession in this country. The great prevalence and rapid spreading tendencies of syphilis render it imperative that every practitioner should supply himself with the best authorities on the subject; and this little book, by so distinguished an author, a confessed disciple of the immortal John Hunter, should be entitled to a prominent place in any medical library.

J. W. T.

MISCELLANEOUS.

"Non omnes eadem mirantur amentque."

Professional Aphorisms.—The following aphorisms were collected and furnished this Journal by M. Schuppert, M. D., of New Orleans:

Necroscopical investigations (autopsies) are often the grave of the finest theories, and against the logic of these facts, unfortunately, there is no appeal.

Experience only becomes useful when guided by reflection.

To individualize is the fundamental principle in medical practice.

Qui bene distinguit bene medebitur.

Medicus minister, non magister naturæ.

Any time in which an operation is well done is quick enough.

To observe little things best, characterizes the great physician.

Try to learn, see with your own eyes, and avoid as much as possible to look through colored glasses.

Never do anything in your profession without a good reason, which, whatever the result may be, will leave your conscience clear.

Keep your office, and the office will keep you.

Take great care of your first patients, ye beginners! for they are the seed from which your practice is to spring.

La medicine est le plus noble des professions et le plus triste des métiers.

A judicious silence is always better than the truth spoken without charity. Be cautious to tell all you actually know or have seen, yet even in telling the truth and nothing but the truth; nothing under any circumstances is more dangerous, and will bring you so certain in disgrace. Truth is a dish not made for every man's stomach, and nothing ought to be handled with more care.

Medical can not be separated from moral science without reciprocal and essential mutilation. There is no truth, however pure and however sacred, upon which falsehood can not fasten and engraft itself thereon.

Man is a despicable animal. There is scarcely any one who may not, like a trout, be taken by tickling. Quacks know this and act upon that knowledge.

When the blind credulity of the public in medical matters is considered, one does not wonder that there are so many quacks and impostors; but, on the contrary, that there are so many upright physicians.

The practitioner who expects his reward from the gratitude of his patients, may be likened to the countryman who waited, in order to cross the river, until the waters had done flowing.

When you want to get rid of a troublesome patient, you have but to send in your bill. We are angels when we come to cure, devils when we ask payment.

If the reward of investigation be taken away, study will be neglected.

The cheapest doctors are also the most ignorant. Cheap doctors and cheap medicines are always in close proximity to a well-filled graveyard.

The Medical Society of London.—The *conversazione* of the Medical Society of London was held in the rooms of the Society on Monday, June 1st, when, according to present custom, the Annual Oration was delivered. Mr. Erasmus Wilson was the orator, and addressed a very numerous gathering of Fellows and visitors on "The Progress of Cutaneous Medicine during the Present Century." The address was a very interesting, and, it need not be added, a very able one, as Mr. Wilson is master of the subject, and, of all men, one who has most especially helped its progress. His oration was listened to with marked and appreciative attention, and was highly applauded. Numerous objects of interest in science and art were distributed about the rooms. Mr. John Browning exhibited under his microspectroscopes the absorption-spectra of tinctures of hyoscyamus, digitalis, etc., the metallic spectra of antimony and bismuth; and Professor Crookes' radiometers. Messrs. Tisley and Spiller showed a new form of medical battery; Messrs. Ross & Co. sent some new microscopes on the Jackson model; and Messrs. Arnold & Son various surgical instruments. Messrs. Barraud & Jerrard supplied some admirable photographs of medical men; the Autotype Company exhibited many beautiful art photographs and sketches; and the Watcombe Company contributed several specimens of their excellent terra-cotta art manufactures. The President of the Society, Mr. W. Adams, exhibited a specimen of Jade taken from the summer palace of the Emperor of China, and an arrow from the Sandwich Islands, attached to the head of which was "a portion of the leg-bone of the celebrated circumnavigator, Captain Cook." Dr. Leared exhibited articles brought from Morocco; Mr. George Browning Icelandic curiosities; and many other Fellows of the Society, such as Mr. Napier, Dr. Godson, Mr. Jabez Hogg, Mr. Clover and Dr. Wills, contributed toward the evening's entertainment by the loan of objects of art, curiosities, and articles of interest. (Bravo!)—*Lond. Med. Times and Gaz.*

Dr. Rufus A. Cobb, of Minot, Maine, has been arrested on the charge of murdering Mrs. Eliza Caldwell, by criminal malpractice.

MEDICAL NEWS.

'Nulla dies sine linea."

Kentucky School of Medicine.—The Twentieth Annual Commencement Exercises of this Institution occurred in this city on June 29th. The exercises are said to have been as interesting as any ever witnessed in Louisville. The audience was large and fashionable, and the music was very superior; one-half of the programme consisting of a concert arranged for the occasion. The salutatorian, Dr. J. T. Culpeper, of Georgia, and the valedictorian, Dr. S. M. Miller, of Tennessee, acquitted themselves exceptionally well, and gave entire satisfaction to their many classmates who had elected them for the discharge of this honorable duty. The prizes given were as follows: The first-honor prize (the gold medal) to J. L. Sawyers, of Iowa; the thesis prize, a medal, to W. G. Gresham, of Mississippi; the prize of Prof. J. M. Keller (surgery) to J. L. Sawyers, Iowa; that of Prof. A. B. Cook (surgery) to T. J. Woods, Arkansas; the prize on obstetrics and gynæcology, given by Profs. J. A. Ireland and John Goodman, to C. B. Alford, Illinois; the prize on chemistry, by Prof. C. W. Wright, to C. B. Alford, Illinois; that on materia medica and therapeutics, given by Prof. J. A. Octerlony, to C. B. Null, North Carolina; the anatomy prize, by Prof. C. W. Kelly, to George M. Carnæhan, Pennsylvania; a private prize on gynæcology, by Dr. W. H. Wathen, of this city, to Milton Turnure, New Jersey; the prize on principles and practice of medicine, by Dr. Gaillard, to Stephen Greenleaf, Iowa. These prizes were well contested and arduously won. The thesis prize was awarded by the following committee, who kindly discharged this onerous duty: Drs. B. M. Wible, S. Brandeis, and John Richardson, of this city.

The graduating class numbered ninety-one (91), and the diploma was conferred on each of these by the Hon. John Roberts, President of the Board of Regents. The applicants for graduation numbered one hundred and four (104).

As two or three representatives of the Medical Press have been extremely officious in the past few months in regard to the

affairs of the Kentucky School of Medicine; as they have been not only willfully incorrect in their statements, but often malicious and slanderous, a few facts taken by three members of the Faculty during the examination of the graduating class will be appreciated by those who desire to learn the truth. The average duration of the undergraduate period of this graduating class is a little more than three and a half ($3\frac{1}{2}$) years. In only one instance was the undergraduate period less than a year, and in only three instances was this period less than two years; in these three instances the period was as follows: 11 months, 15 months, and 18 months. The great majority had been studying medicine regularly for over two years; some for four, five, and six years. Can any medical college show a longer average undergraduate period than that herein given; or as large a percentage of those who had actually studied three and four years?

These facts, taken by three gentlemen separately (and in all cases directly from the graduates), are due to the Profession, who have, in this respect, been scandalously and purposely misled by a small fraction of the Medical Press.

The surgical questions used at Harvard in examining their highest grade students, were unexpectedly propounded to this class by Professor Keller, and were all promptly and correctly answered. In other branches, the proficiency manifested was equally excellent. The friends of the Kentucky School of Medicine, and all who seek the truth, will be gratified to learn these simple facts; and while the administrators of this School design to make its diploma strictly a testimonial of merit, and in no sense a certificate of the length of the undergraduate period of study, while qualification and not the length of the time of study is with them the true criterion in conferring a degree, it is satisfactory to all to know, that where no restrictions as to time of study have been imposed, the result of the test is such as has been given.

The French not Cosmopolitan.—While the younger men possess in a remarkable degree clinical tact and acumen, and probably know all that has been written and said in France upon their own subjects, they would appear to be far behind the Germans—and, let me hope, the English—in their knowledge of

the medicine of other lands. All German medical men know French; how many French know a word of German? They complain that they can not find the time to learn it, if they would; they "have a concours," and must be busy over their own books, and deny themselves the pleasure and advantages of travel. I need not remind you that this system has given a very distinct shape to the French character in our own profession and in others; and that it has, in a great measure, to account for the self-satisfied and somewhat affected tone that characterizes not a few of their works. I believe I am not wrong when I say that the present generation of professional men here are becoming actively alive to this grave defect. Once this has been better appreciated, the student will probably not fail to find time, even amidst all his many labors, to keep up the acquaintance with other languages which he certainly made at school. With their brilliant parts and splendid opportunities for study, it will be a fortunate day for the Profession in Paris when they have become more cosmopolitan.—*Med. Times and Gaz.*——*A Picture of the Modern System of City Drainage—A Significant Lesson.*—At the present time, when the question of the pollution of our rivers is absorbing so much public attention, it will not be considered out of place if we publish a few remarks which occur in the Report for the year 1875, of Dr. Alfred Watson, Medical Officer of Health for the Urban Districts of Penistone and Thurlstone:—"The river Don is at the present time the receptacle for all the sewage and liquid refuse of the district. For a considerable distance from the reservoir at Dunsford it is a beautiful stream of pure water. In the reservoir itself, and as far down as the junction with the Sledbrook Dyke, near Hazelhead, fish live at the present moment, but at this point ochre water from Crowedge comes in, and impurity commences. By the time it has reached Penistone-bridge it may be said to have been converted into an open drain. The river is liable to floods all the year round, and on the subsidence of these the banks are more or less covered with the slimy refuse of drainage. At Penistone-bridge the river sweeps away to a considerable distance from the town, and it is not until it reaches Spring Vale that it again becomes a source of danger from a sanitary point of view. The Cubley Brook

is the watercourse from which danger is to be apprehended. This little stream receives the refuse and drainage from the brewery at Cubley, and immediately after it receives all the drainage, of every kind, from the Penistone-green. It soon becomes a stinking ditch, and for six months of the year it is a standing nuisance to the unfortunate people who live beside it. Many of the houses are close to its edge, and persons living in them suffer from headache, sickness, and general malaise.—*Med. Times and Gaz.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The Convention of Medical Colleges.—An official copy of the proceedings of this remarkable Body has just been received. The following colleges were represented: Jefferson Medical College, Pennsylvania; Medical Department of the University of Pennsylvania; College of Physicians and Surgeons, New York; Medical Department of the University of Louisville, Kentucky; Hospital Medical College, Kentucky; Long Island Hospital Medical College; Medical Department of the University of Iowa; College of Physicians and Surgeons, Syracuse, N. Y.; Chicago Medical College; Medical Department of the University of Georgia; Indiana Medical College; Medical Department of the University of Wooster; Cleveland Medical College; Detroit Medical College; Starling Medical College; Medical Department of the University of Vermont; St. Louis Medical College, Missouri; Atlanta Medical College; Medical Department of the University of Nashville; Medical Department of Vanderbilt University; Missouri Medical College; Keokuk College of Physicians and Surgeons; Columbus Medical College.

The following colleges were non-participants in this movement, and absent on this occasion: Bellevue Hospital Medical College; Medical Department of the University of New York;

Albany Medical College; Buffalo Medical College; Harvard Medical College; Medical Department of the University of Maryland; Medical Department of Washington University, Maryland; College of Physicians and Surgeons, Baltimore, Md.; University of Virginia; Medical College of Virginia; Medical College of the State of South Carolina; Medical Department of the University of South Carolina; Savannah Medical College; Mobile Medical College; University of Louisiana; Galveston Medical College; Medical Department of the University of Michigan; Rush Medical College; Medical Department of the University of Missouri; Evansville Medical College; Cincinnati College of Medicine and Surgery; Miami Medical College; Medical College of Ohio; Louisville Medical College; Kentucky School of Medicine; Medical College of the Pacific; Dartmouth Medical College; Bowdoin Medical College; Portland Medical College.

It seems that there were twenty-three colleges present; or, omitting the Vanderbilt University, which is at present identical in session and work with the University of Nashville, twenty-two colleges only were represented. There were thirty medical colleges absent. The Convention then did not represent even one-half of the number of colleges in this country. Again, there were only four full-fee colleges present in the Convention; nineteen of the number present being known as low-fee institutions; assembled with the view of so conducting legislation as to secure to themselves the exclusive privilege of offering fees far below those asked in Eastern colleges, and of preventing by legislation colleges in New York, Maryland, Virginia, and Kentucky from offering reduced fees to those certified to be worthy of assistance. That is to say, nearly nine-tenths of the colleges present had assembled with the view of perpetuating their universal beneficiary system of $40 or $50, and of protecting themselves by reciprocal interested action in its adoption; while they were equally intent upon endeavoring to prevent other colleges from offering a restricted beneficiary system of fees to those certified to need assistance. The first step taken by this Convention was to make its action not only irresponsible but ridiculous, by passing the following resolution:

Resolved, That the action of this Convention shall not be considered binding upon the colleges represented unless endorsed by their respective Faculties!!!

If this is not child's play, it will be difficult to find action anywhere more puerile. As the official paper furnished this Journal contains no record of either individual or aggregate Faculty endorsement of these remarkable proceedings, it is only fair to state that the Faculties represented have not yet endorsed the action of their delegates!! When it is remembered that colleges were requested to send delegates "clothed with *plenary* powers to determine final action on every question," this childish and irresponsible legislation must cover the parties to it with contempt and ridicule; "*montes parturiunt et nascitur ridiculus mus.*"

As the Medical Department of the University of Louisville is entitled to all of the credit of this brilliant movement, its Dean was, of course, made chairman of the committee to prepare business for the meeting; whether this accounts for the failure of it, each one qualified to judge must, for himself, determine. It can be readily understood, therefore, that as soon as the members of the Convention returned from their dinners and the meeting reässembled, that the first question propounded was, shall the beneficiary system (not the low-fee manifestation of it) be condemned or endorsed? Even Dumas, with his endless and wonderful fertility of imagination, could not have anticipated the answer given by the Convention to this question. The Convention decided that, as the beneficiary system entails upon colleges the objectionable necessity of "discriminating between students who may be equally deserving," it should be condemned!! Perhaps this is, after all, the basis and secret of the low-fee system of the nineteen low-fee colleges in the Convention; that their system does not entail the necessity of "discriminating between students," but remits $90 to every one; and if the objection be made that this is a wholesale underbidding of Eastern colleges, the philanthropic answer is, that as they may make cruel mistakes in their efforts at "discriminating between students," the safest plan is to remit $90 to all, and thus offer to take each for $90 less than the Eastern rates. Did it occur to the Convention that its answer, if logically applied, would close every Masonic lodge and kindred institution in the

world; that a course necessitating discrimination between the affluent and the needy is essential in the practice of every physician? But this foolish subterfuge does not remove the difficulty; colleges must in future (and will in future), in aiding worthy young men, be compelled to "discriminate" between these and those who need no help. The low-fee schools, however, will not have to discriminate, for they are, in the future, as in the past, to give all young men a reduction each of $90 below the fees of New York and Philadelphia medical colleges. Just souls; they are afraid to "discriminate," and so take in (no pun intended) all.

The next question was, "shall two consecutive courses of lectures in one year entitle students to become candidates for graduation?" The answer was that the student may come forward, provided six months intervene between the courses; or, that is to say, provided the student takes these two "consecutive courses" in a *Winter* school!! The Long Island Hospital College, which went into this Convention, registered no protest; the vote would have been 22 to 1, and so it kept silent. Of course, this Convention, by such legislation, would, if it had the least legal or moral power, ruin the old University of Virginia, which gives not two courses in a year, but one, and graduates first-course students at the end of that period.

Perhaps the most significant question was the following: "Is there any reason why the customary diploma fee should be abolished?" The answer was as follows: "Resolved, That it is the sense of this Convention that the diploma fee should not be abolished." Of course; "put money in thy purse, Roderigo"; and though the justice of the proceeding can not be demonstrated, and the proceeding be wholly unjustifiable, still "put money in thy purse." This important question was promptly settled by ballot, in the giving of which all present were pecuniarily interested! It remains to be seen, however, what the Profession, not pecuniarily interested, will have to say and do in regard to this charge of $30 for a diploma which is purchased for one dollar. It is evident to every disinterested person that a profit of three thousand per cent. is not a creditable transaction for a scientific institution; the labor of teaching

has terminated, there is, therefore, no charge for labor; the diploma costs one dollar; it is sold for thirty!!

A curious resolution passed was the following: "No degree in medicine should be conferred under any circumstances except after an examination in person of the candidate upon all the branches of medicine." It is known to all that there are hundreds of gray-haired practitioners in this country who have gained high position, who are recognized by their States as physicians, by Societies, and by those who hold consultations with them; yet they hold no degree. They are old and distinguished practitioners, often revered and respected; still they have often no degree. Their fellow-practitioners and their State Medical Society would testify to their position and to their being in all respects worthy of the Honorary Degree; as competent a tribunal as the most exacting could desire. What will such men and their friends say to this resolution requiring these gray-haired and accomplished practitioners to go before a College Faculty and be examined upon all of the branches before the conferring of the Honorary Degree?

By this same resolution the Ad Eundem Degree is only to be conferred after the examination of the candidate!! This is the most melancholy spectacle ever presented; that American Medical Colleges have not sufficient respect for each other to issue to the graduate of one college the Ad Eundem Diploma of the other. The Faculty of the Jefferson Medical College shall have so little respect for the Faculty of the University of Pennsylvania, as to refuse to a graduate of the latter the Ad Eundem Degree of the former! "The resolution was unanimously adopted." The reader will believe that this must be an error; it is taken from the official record.

After reading this brief and generous review of the work of this Convention, (to be an Association hereafter!) it is easy to understand why it was that those present "resolved that the action of this Convention shall not be binding upon the colleges represented, unless endorsed by their respective Faculties." It is easier to understand why every one of these Faculties will refuse to ratify such a concatenation of nonsense and puerility, and accord the honor of this farce to those who enacted it.

Fig. 1.

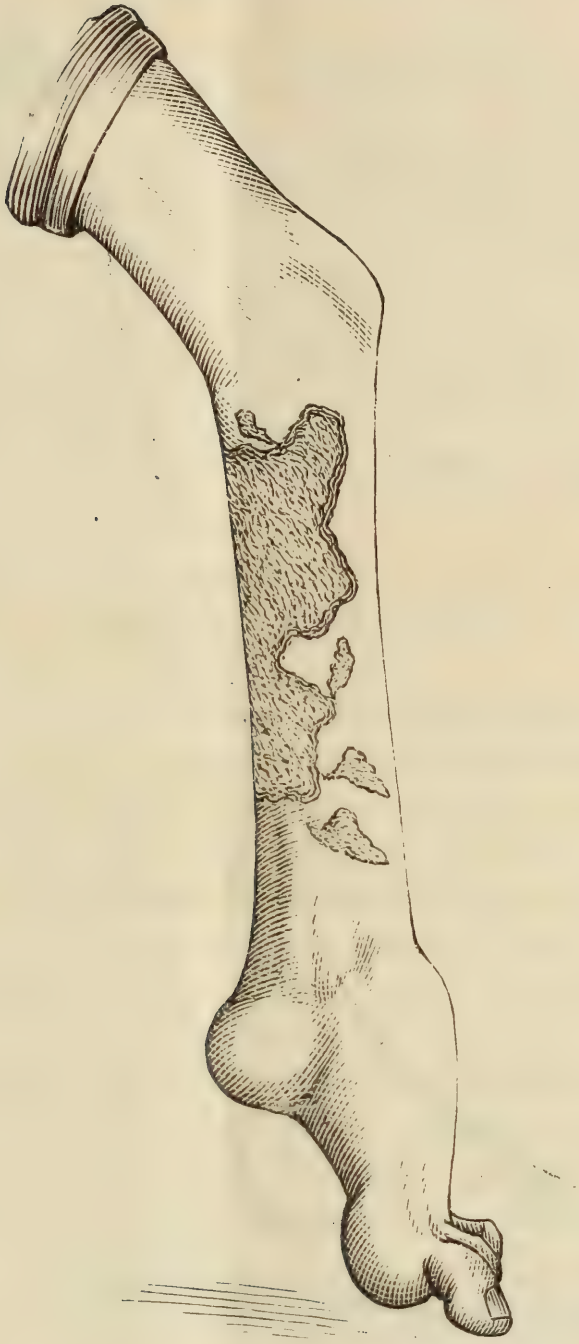


Fig. 2.

RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—*A Case of Phalangeal Club-foot; or, Pes Equinus of the Old Writers.* By CLAUDIUS H. MASTIN, M. D., L.L. D., Mobile, Ala.

It is well known that in this variety of deformity the patient walks upon the ball of the foot, the toes, or the metatarso-phalangeal articulations; no other portion of the foot reaches the ground; and for the obvious reason that the deformity is caused by a contraction or shortening of the gastrocnemial and soleal muscles; sometimes aided by a like defect in the flexor of the toes, which prevents the heel being pressed down; the foot being all the while extended on the leg.

Being a contraction of these muscles, it is very rarely a congenital affection, and consequently depends upon some traumatic cause. Still in some varieties of congenital club-foot we find a complication of the phalangeal associated with other distortions of the foot; as in those forms which have been designated respectively the equino-varus and the equino-valgus; the first, where the foot is twisted outward and the heel very much elevated, so that the patient treads upon the outer side of the foot and upon the toes without the heel reaching the ground; whilst in simple varus it is rather the side and dorsum of the foot which becomes the support, without, however, any elevation of the heel. In the second variety, equino-valgus, the foot is turned inward, the heel is elevated, and the patient rests upon

the inner margin of the foot without pressure either upon the smaller toes or upon the heel—but rather along the inner side of the metatarsal bone of the great toe—the heel being at the same time elevated. In uncomplicated valgus, both the heel and the inner side of the arch of the foot are the portions which come in contact with the ground—the foot being strongly everted.

Now these deformities being usually congenital, are not dependent upon injury or accident, and are of more frequent occurrence; whilst on the other hand pure phalangeal club-foot, uncomplicated, is almost always the result of some injury or pathological lesion, and consequently a much rarer variety than any one of the others.

On account of its exceeding rarity and the satisfactory results which may be attained from a judicious course of surgical treatment, I have thought that the details of a very marked case of this deformity may prove interesting to the readers of your Journal. To this end I herewith furnish the clinical notes of the case, with a rough though accurate pencil sketch of the member before and after treatment.

Thomas C., a youth, 18 years of age, well grown, and in ordinary good general health, presented for treatment of an obstinate ulceration of his left leg, which had existed for over ten years. His mother furnished the following points in the history of his case, stating that, when about eight years old, he was playing with the little boys at school, and was accidentally struck upon the side of the leg (on the inner side), just below the knee; the projectile being "a cannon ball" (I presume it was a small iron shot, possibly a canister or grape-shot), and that he suffered a great deal of pain, and very soon thereafter suppuration began and progressed until the soft parts gave way and an ulcer was established. It refused to heal, and becoming obstinate, slowly crept along from one side to the other, until the whole posterior side of the calf was superficially ulcerated—a sort of serpiginous ulcer, which would heal on one edge and eat away on the other, until at last almost the entire circumference of the leg had at one time or the other been embraced in the ulcerated zone, as will be seen by reference to Fig. 1.

Passing from the hand of one physician to another, as either the doctor or the patient became wearied with the case, or the treatment resorted to, and having run the gauntlet of caustics, poultices, washes, plasters, ointments and unguents, which failed to heal "the ulcerous patch," he was placed in my hands in the early days of the past March, to be operated upon for "necrosis of the tibia"—such being the diagnosis of his last physician—(?) as the cause of the obstinacy of the ulceration, notwithstanding the boy had been standing on tip-toe for two years past, with a shortened tendo-achillis, and the integument covering the face of the tibia perfectly sound!

An examination of the parts revealed the fact, that the ulceration was superficial; the tibia sound; but from long ulceration the fascia of the leg had become very dense, the gastrocnemii and soleal muscles shortened, and the tendo-achillis so much contracted that the heel was lifted about $5\frac{1}{2}$ inches from the floor, the patient resting alone on the tip of his toes, as shown in Fig. 1. The ham tendons were contracted, the knee semi-flexed and partially anchylosed.

The treatment was apparent; all tension must be removed from the calf muscles, so that they could be placed in a condition of perfect rest, and thus permit the ulceration to heal.

To this end I cut the tendo-achillis, and placed the leg upon a splint, with foot-board so constructed as to keep the heel down and the foot at a right angle with the leg, dressing the ulceration with ordinary lead lotions, and ordering absolute rest in the recumbent posture. At the end of ten days I found the granulations healthy and the ulceration healing around the entire line of edge kindly and rapidly; in about two weeks from the date on which I cut the tendo-achillis, the ulceration was covered to an extent sufficient to justify the application of an apparatus which had been ordered for the case; simply an ordinary club-foot shoe, with side springs extending half way up the thigh, with hinge-joint at the knee, and a side screw both at the ankle and knee joints, by which the heel could be brought down and kept in position, while the knee cap and side screw, with gentle pressure, would tend to straighten the flexed knee by extending it upon the thigh.

After applying the apparatus, I found that although the heel came down squarely against the floor, and the boy enabled to step with the sole flat, still there was considerable tendency to an eversion of the foot, and the peroneal muscles were found so contracted that their tendons were tense under the external malleolus. To remedy this defect, I cut the peroneus longus and brevis tendons just in front and below the outer malleolar extremity of the fibula, and immediately the foot assumed the natural and normal position.

By a properly constructed apparatus the foot has been kept in position, and the lad is now walking with comparative ease and comfort; the ulceration has healed entirely, and the articulations gradually regaining their natural strength and motion. The knee joint is now almost entirely straight, and its extension and flexion perfectly reëstablished.

Owing to the extensive ulceration and the long-continued disuse of the leg, the calf is very moderately developed; still he has a sound leg, and from a cripple of ten years' duration he has been restored to the present condition, as shown by Fig. 2.; all dependent upon a section of the contracted tendo-achillis and the long and short peroneal muscles.

Notwithstanding the great distortion of the foot, by reason of an almost complete dislocation of the tibio-fibular-astragalean articulation—the articular surface of the astragalus presenting upon the dorsum of the foot, and the tibia and fibula resting upon the calcis—there was not enough contraction of the plantar fascia to require its division. After the section of the tendo-achillis, very considerable force was required to overcome the false anchylosis of the ankle joint and reduce the dislocation, which, however, under the influence of an anæsthetic, went into place with an audible sound.

This case is an interesting one, as illustrative of the fact that ulcerations are oftentimes kept up by the contraction of tissues, and it shows the value of tenotomy for their relief.

ART. II.—*Convulsions.* By B. M. WIBLE, M. D., Louisville, Kentucky.

Convulsions are of such frequent occurrence in daily practice, and produce so much alarm and excitement among the friends of the patient, and such hurried demands on the practitioner for his services, that he can not be too well posted in regard to their nature, import, and correct management. The phenomena attending a convulsion have been so often and well described, and are so familiar, that a description here is not needed.

The part of the nervous system involved, essentially, is that of the diastaltic* system; or, more familiarly, the true spinal system. The brain is not directly involved, nor is the ganglionic system. The brain suffers as an effect of the turgescence of the veins which return the blood from that organ, produced by the irregular action of the muscles of the neck. Many of the morbid appearances found in the brain, after death from convulsions, are due to this mechanical impediment to the return of blood from the brain; and have been set forth by writers as a *cause* instead of an *effect* of the convulsions.

The causes of convulsions acting directly on the diastaltic system, likewise indirectly, influence the ganglionic system, which especially governs the flow of arterial blood, and the pallor of the face observed immediately before a convulsive attack is due to a contraction of the walls of the arteries of the brain. This influence of the diastaltic over the ganglionic or nutritive system, of which the above is an example, is a subject of great importance, and deserves careful study.

Causes.—Any disease within the spine, whether effusion, tumor, exostosis, etc., may induce convulsions. In acute inflammation of the brain convulsions come after, and as a consequence of effusion. In such instances, the effused fluid causes *direct excitation* of the medulla; it may produce *counter pressure*, either of which, it is well-known, will produce convulsions. Poisoned blood, as found in most of the eruptive fevers, circu-

*A term employed by Marshall Hall instead of reflex action and excito-motory, because the meaning of these words, originally employed by him, was so distorted by most authors that readers were confused.

lating among the neurine of the diastaltic centres, becomes a cause, likewise that from malarial poisoning; mental emotions, as fright, surprise, etc., are to be regarded as causes.

Such causes are considered as of centric origin.* The most fruitful sources of convulsions are of excentric origin. In such instances the exciting cause acts directly on the peripheral termination of the esodic nerves, as in indigestion; particularly in a loaded state of the stomach or rectum, impacted with undigested materials; worms in the stomach or rectum, an advancing tooth in the young, or any agent which unduly excites the esodic nerves in any part of the body. The slow or gradual action of the causes mentioned may not cause, at first, convulsive movements, but they may merely produce a state of *augmented excitability*, so that a more intense action of these will the more readily produce convulsive action. The slow or persistent action of physical substances on the peripheral esodic nerves as a cause of augmented excitability is a subject of much importance, and deserves a closer study than it has received from pathologists and physiologists. These slow actions of physical substances on these nerves do not limit their influence to the spinal cord, but are extended to the ganglionic nerves, and these, by their abnormal action, derange the nutritive process, especially in the neurine of the medulla spinalis and oblongata. What some writers term anæmia of the spinal cord is merely a disturbed nutrition of the spinal marrow, produced by this slow but persistent excitation of esodic nerves. The interesting cases reported by Dr. Sayre, of New York, of preputial excitation,† are examples illustrative of this point.

Diagnosis.—To know if a convulsion is of *centric* or of *ex-*

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* The terms centric and excentric were originally employed by Marshall Hall; the former to denote the nerve centre immediately disturbed; the latter to denote the centre disturbed by an excitation made upon the terminal or peripheral extremity of the ingoing spinal nerve.

† The term excitation is technical, and to be applied to nervous phenomena, while the term irritation is to muscular and vascular phenomena; one excites a nerve to action and irritates a muscle to action. A property of nerve structure is excitability; a muscle has irritability.

centric origin, the probable cause should be ascertained. If convulsions come on immediately after injury of the head, neck, or back, the presumption would be that some physical agent is irritating the neurine of the diastaltic centres. If they come on in the forming state of acute disease, especially the eruptive fevers, we would ascribe them to morbid material circulating in the blood; and here peripheral or excentric causes often coöperate. This is especially so in cases of convulsions arising from morbid material in the blood in children, where peripheral excitation, derangement of the stomach and bowels, coëxist with the convulsions.

When convulsions come on during an encephalitis, they can be ascribed almost certainly to effusion within the cranium. Convulsions, especially of an epileptic character, arise from a depressed portion of the skull irritating the dura mater. Such convulsions, however, are to be regarded as excentric in their nature, the cause acting on esodic nerves distributed to that membrane. This inference is drawn from the fact, that when an exposed dura mater, in some of the lower animals, is pinched or otherwise irritated, convulsions will be excited.

Venous blood unduly detained in the cranium may cause convulsions from *compression*, or from *direct excitation* of the diastaltic centres by the carbonic acid in the blood. This form of convulsion, excited by the cause here mentioned, is apt to arise during the progress of whooping cough, where the muscles of the neck are thrown into excessive action by coughing, compressing the veins, and detaining the venous blood in the head.*

The most frequent cause of convulsions arise from irritative substances in the alimentary canal. Here we can often determine by the convulsive phenomena the part of the alimentary canal in which the irritating materials are lodged. When these irritants are in the stomach, the muscles of the throat, neck,

* The venous congestion of the encephalon, produced by contraction of the muscles of the neck, as occurs in spasmodic diseases, by muscular efforts, by straining at stool, etc., is a factor in producing convulsions and in producing cerebral hæmorrhage, much overlooked by most of the writers on diseases of the nervous system.

and arms are most severely thrown into spasmodic action, and when they are lodged in the rectum, the inferior extremities are the more strongly convulsed.

Prognosis.—In all cases of centric convulsions, the prognosis is unfavorable, owing to the difficulty of removing the cause. In excentric convulsions the prognosis is favorable, since the cause can generally be removed.

Treatment.—The principles of treatment consist:

1st. In the removal of the cause.

2d. In the use of means to allay or diminish *augmented excitability.*

First.—When convulsions depend upon disease within the cranium, we have very uncertain means of cure. If the cause be effusion resulting from inflammation, saturating the system with the iodide of potassium has had advocates, but I confess I have found no benefit from its use. If the cause should be a node of syphilitic origin, this remedy will often be of benefit. If the cause be some disorder of the blood, eliminants are indicated; if malarial poisoning, quinine; if uræmic poisoning, hydragogues, purgatives, sudorifics and diuretics.

If the cause be of excentric origin, removal of the causes is the chief indication. If the cause be irritation of the gums from teething, the free liberation of the advancing tooth is an important means of cure. If the stomach be overloaded with indigestible food, antacid emetics ought to be given as early as possible; if the rectum be loaded, its evacuation is indispensable, and the best means consist in the free administration of enemata of warm water, a special advantage of this is that it can be administered during the convulsive action, and its effect is often immediate.

Second. To allay or reduce augmented excitability, the warm bath is a remedy of much value. It soothes the excitable nervous system, and if it be made quite warm and prolonged, it relaxes, and absolutely reduces nervous excitability. The mode of using the bath is important. The temperature of it should be that of the patient at first, for if too warm or too cold, it excites and increases the intensity of the convulsions. After the patient is in the bath, hot water should be gradually added,

until the temperature exceeds considerably that of the patient. When the convulsions cease or subside after a bath of this kind of twenty or thirty minutes' duration, the patient should be enveloped in a warm sheet, and allowed to dry in the sheet, and kept absolutely quiet in bed. There should be no frictions to the surface, or mustard plasters applied to the spine or soles of the feet, as is the popular practice, because the object is to soothe, not to excite the system. Chloroform inhalations are often most valuable. They temporarily allay nervous excitability and power and the convulsive action, so as to render possible the internal use of medicines. Hyoscyamus in combination with the bicarbonate of potassa or soda, may be given with the prospect of alleviating the tendency to convulsions. The bromide of potassium is also thought to be valuable. On theoretical grounds the belladonna is indicated. Sometimes when convulsions are associated with gastro-intestinal disturbances, opium becomes a valuable remedy. It should not be used, however, until the alimentary canal has been freed by emetics or purgatives.

The sole object of this essay is to set forth the principles to guide in ascertaining the nature, cause and diagnosis of convulsions, for when these are comprehended, their modes of treatment become obvious.*

* This article was read before the Medico-Chirurgical Society, and there fully discussed.

ART. III.—*Cerebral Congestion.* By HENRY F. BARNES, M. D., Louisville, Ky. Report of the Case of the late James S. Athon, M. D., of Indianapolis, Indiana, as viewed from a Biographical and Medical Standpoint; also, Report of Case of Captain Smith, of Louisville, Ky. [Read before the Medico-Chirurgical Society, of Louisville, by request of the Committee, May 27, 1876.]

"Causa latet vis est notissima."

There are two forms of cerebral congestion, which are recognized as the active and the passive.

The chief features characterizing the attacks are the apoplectic, the epileptic, and the maniacal, and to which might be added

other features akin to the three last mentioned. I will not attempt to follow in the wake of my illustrious predecessors in this department of medical science by the introduction of voluminous statistics, believing as I do that there is a disposition to multiply statistics which are mythical.

My principal experience has been acquired from the observation and treatment of that class which has resulted in mania of some form. During the six consecutive years in which I had the honor of being one of the medical officers of the Indiana Hospital for the Insane, I treated many hundreds of cases of mania. Of this large number of cases, some 66 per cent. of recent cases recovered, and of the remaining 34 per cent., and of the semi-chronic cases admitted, some 44 per cent. recovered; comparatively few chronic cases recovered their reason, and still fewer died from the effects of mania *per se;* and of those who died, post-mortems were precluded, by reason of prejudice of friends; yet I now and then availed myself of an autopsy, and was rewarded by both positive and negative appearances where the symptoms were uniform during the existence of mania. I am almost sure that a large majority of cases of mania, or mania ephemera, under which heads may be classified emotional insanity, homicidal mania, kleptomania, pyromania, dipsomania, and many other forms of mania of medico-legal importance, are the result of cerebral congestion. Although the subjects of these forms of cerebral congestion are, and should be, regarded as objects of commiseration by men of science, I am sorry to say that they are not so regarded by many members of our learned Profession, who should, above all others, be governed by sound discretion, and yield a ready acquiescence to the judgment of experts in this department. If cerebral congestion is suddenly induced from great mental anxiety, or from over-taxation of the brain from any cause, and an overt act is the result, it is now regarded as a farce to attempt to set up the plea of irresponsibility. I will not attempt to reason with men who are so lost to a sense of justice and humanity. It is dogmatic in the extreme, and by their course of reasoning the innocent must be held responsible in order that the guilty may be punished.

The causes of cerebral congestion are legion, and, as laid down by Professor Hammond and others, and which I fully endorse, are as follows:

The most common are bad hygienic influences, such as the inhalation of noxious atmosphere, exposure to intense heat, cold or dampness, a poor quality of food, disease of the heart, dependent position of the head, constriction of the vessels of the neck from any cause, constipation of the bowels, rapid eating, the direct rays of the sun, certain general and local diseases, such as disorders of menstruation, erysipelas, the stoppage of a customary flow, fevers, embolism, thrombosis, and the like; alcohol, opium, quinine, strychnia, belladonna, haschisch, and other drugs; the pressure of tumors upon the vessels of the neck, masturbation, excessive intellectual exertion and great emotional disturbances, such as grief, jealousy, disappointed affection, and, above all, excessive mental anxiety. Under the last head I regard syphilis as a factor in the production of this disease aside from its physical derangement of this organ. When we take into consideration the numerous causes which are calculated to produce this disease, and the tendency to mania as a result, it is not at all surprising that sudden congestion of this organ might result in an overt act without any sign of mental disease preceding the attack, and knowing, as we do, that the attack frequently comes on suddenly, and the result ephemeral, we need not be surprised that signs of mental disease may not follow or continue for any considerable length of time after the perpetration of some extravagant physical act, such as arson or murder, with seeming *malice aforethouyht* or otherwise.

If it should culminate in suicide, which is frequently the case, there is no disposition to criticise the expert who declares emotional mental aberration the cause which produced the sad effect.

Many of the eccentricities which characterize men of genius and learning are caused from this condition of the brain, which not unfrequently results in mania and in apoplexy and paralysis. I hope my fellows will pardon me for dwelling upon these points, which have been so indelibly impressed upon my mind by years of the closest observation, and from having so fre-

quently appeared in the courts of the country as an expert in such cases, and where I have witnessed such intolerable misdirection of justice through the seeming prejudices of the judges and juries, encouraged by members of our Profession.

It is unnecessary for me to reïterate that which is so well set forth by recent authorities, as to the stages—pathological, and morbid anotomical conditions, nor do I deem it necessary to point out the distinctions which are so lucidly delineated in regard to symptomatology. As a general thing, there is little trouble in the way of diagnosis, from the fact that the symptoms, both objectively and subjectively, are characteristic of the disease. In regard to prognosis, I might say with emphasis that it is generally favorable in the first stage, which is prior to the epileptic, apoplectic and maniacal manifestations, but after this period frequently unfavorable

I am quite sure there are many mixed and obscure cases, a few of which terminate in cerebral hæmorrhage through bad management or inauspicious surroundings. I am inclined to think that such was the condition in the case of my late lamented friend and honored preceptor, Jas. S. Athon, M. D., of Indianapolis. This case was at first regarded as one of cerebral hæmorrhage, if I mistake not, by his attending physicians. I was called to see him some three days after he was first attacked, and, after careful examination and his own history of all the facts connected with his case, I diagnosed it as one of passive cerebral congestion, caused remotely from physical injury, but more directly from improper surroundings and bad hygienic influences.

The Doctor was thrown from a horse and kicked upon the head by the animal some thirty years ago, from the effects of which he was insensible for several days, and manifested all the symptoms of compression from effusion, there being *contrecoup*, as diagnosed by Dr. Flint, who was called from this city (Louisville) to Charleston, Indiana, to see him. The Doctor suffered some confusion of intellect for a considerable period after his recovery, and there was afterward a stiffened condition of the muscles of the neck. He afterwards served as surgeon in the United States Army during the war with Mexico, and re-

tired with great honor, but was a great sufferer from the effects of diarrhœa, which he had contracted while in the service. After his return, as a relief from the labor, cares, and anxieties of an overwhelming practice, he entered political life, and was elected to the Legislature, and was reëlected afterwards, serving his constituents both in the House and Senate with great honor. He was also chosen Elector for his district during the Pierce and King campaign, and was afterwards a prominent candidate for Congress in his district, and ever afterwards was one of the leaders of the Democracy in Indiana.

During all his early political career his health was seriously impaired, and, added to other ailments, he was threatened with tuberculosis, and suffered from pulmonary hæmorrhage with severe cough, had hectic fever, together with all the symptoms of fatal pulmonary degeneration. He was afterwards appointed Superintendent of the Indiana Hospital for the Insane, which position he held for a period of nine years with great honor to himself and the State.

During this period, by proper care and good hygienic surroundings, he recovered and became robust and healthy. In short, his constitution was *made over*, and even the temperament seemed changed from the nervo-sanguine to that of nervo-bilious; a strange metamorphosis, but apparently a reality. His powers of endurance were remarkable for one of his peculiar history.

After retiring from the hospital, he made a laborious canvass for Secretary of State, "in times that tried men's souls," during the late civil war, and was triumphantly elected, while several of his associates on the State ticket were defeated. During this campaign he was denounced by his political opponents as a Secessionist and threatened with incarceration in the bastile and hanging. He was afterwards prominently spoken of for Governor, and it was even charged that his party intended to kidnap Governor Morton and declare him Governor of Indiana.

I speak of these matters in order to show forth his mental powers, force of character, and the magnetic influence he possessed after the seeming destruction of and making over of the physical man. He afterwards gave up politics, to a certain extent,

and devoted himself almost exclusively to his loved and honored profession. He was an indomitable worker in his profession. He was thoroughly posted in his great specialty—psychology—in which his opinion was law. He was a fine surgeon and obstetrician, and was a thorough diagnostician and therapeutist, and in all that goes to make up the general practitioner, scarcely had an equal or rival. As a friend, he was unflinching; as a leader and personally, he was brave and bold, recognizing no such word as fail. He was a self-made man in every sense of the term, both physically and mentally, practically speaking. He elevated himself to almost the first rank in every department of life, and professionally, politically, and socially was the acknowledged peer of all. Unfortunately, he was inveigled into an alliance a few years since, which materially compromised him socially, and to some extent personally and politically, and which no doubt caused him much mental anxiety; for, as the sequel proved, he was undyingly devoted to his two accomplished daughters and an only son, notwithstanding he was seemingly alienated from them through the wiles of an unworthy associate in life. I was summoned to Dr. Athon's bedside by a secret messenger sent by the Doctor himself without advice from any source whatever. I was not called as a consulting physician, but as his medical adviser and confidential friend. I well knew his confidence in my opinion in a case of the kind, for he and I had been intimately associated, both socially and professionally, for over a quarter of a century. I shall never forget the expression of delight which lit up the features of the Doctor when I approached his bedside and the hearty grasp of his left hand, which was said to have been paralyzed. I bade him be of good cheer, as I had found him in much better condition than I expected. He said to me, that early in the morning of September 28, 1875, he suffered from an unpleasant pain in the left hypochondriac region, and experienced at the same time slight vertigo, which caused him to remark to those about him that he feared he was threatened with paralysis. He went out as usual in his carriage to visit his patients, but in getting in and out of his carriage felt and acted like a drunken man.

After reaching his office, he prescribed for several patients, and in the act of extracting a tooth for a little girl, his head being in a dependent position, an attack of vertigo came on and he fell to the floor. He soon resumed the erect position, and seemingly without a moment's loss of consciousness, made his way to his desk, wrote a receipt, and signed his name thereto. He then told his friends that he would have to give up, and was conveyed to his residence.

There was slight paresis of the left side, the nerves of motion only being affected to any extent. The power of speech was not materially affected, nor were there any aphasic symptoms presented in his case. In order to convince me that he was correct in his statements, and assuring me that his condition was much the same as when first attacked, he grasped my right hand with his left hand and said, "Doctor, do you not think there is perfect coördination in these muscles?" And to further prove the paresis was ephemeral, he flexed and extended the upper and lower limbs of the left side with perfect ease, and descanted upon the beauty and sublimity of their coördination, while at the same time he laughed heartily at some quaint remark of mine. The pulse was regular, temperature normal, pupils same, breathing full and regular, secretions healthy, and he seemed in full possession of all his faculties, as he was able to converse intelligently on all topics introduced.

I was assured that it was the intention of the Doctor that I should remain several days, at least until convalescence had well set in, but owing to his peculiar surroundings, I was satisfied that it would be incompatible with my feelings, and from the seeming promptings of the doctors in attendance, might be detrimental to his restoration. After endorsing the treatment so far, and assuring him that I would confer with one of the doctors in attendance and offer such suggestions as I thought best, I bade him a last farewell, promising him that I would return to see him at any time thought necessary. I called upon the physician in question, and gave him my opinion freely and unreservedly, in which he partially acquiesced, and said he thought there was some spinal trouble, to which I could not agree. I recommended, in addition to the bromides of potas-

sium and sodium, the oxide of zinc, with the alternate use of alcoholic stimulants, etc. The physician in question voluntarily promised to keep me advised of his condition and guard well his surroundings, but utterly failed to do so, and I heard nothing from him till after the death and autopsy, when he wrote me a complimentary and conciliatory letter, in which he declared that he was ashamed of himself, but would send me a copy of the autopsy, which has not arrived yet, and hence I am without means to verify my diagnosis in the case. My prognosis was sustained, however, as the sequel of the first attack clearly proved. General Jeff. C. Davis, the son-in-law of Dr. Athon, told me that the Doctor so far recovered as to be able to take his meals at his table, and examine papers, make calculations, etc., within a period of ten or twelve days from the period of first attack, all of which would seem to verify my diagnosis.

But alas! at this auspicious period his death knell was sounded through the machinations of an ill-starred creature, and one who should have been his best friend on earth.

How sad that mercenary motives should have been the instigation, in any degree, of the death of one so noble and so distinguished, not only in his chosen profession, but who was politically and socially regarded as a gentleman whom the people delighted to honor. The cerebral excitement, caused from these mercenary contentions, undoubtedly superinduced a hyperæmic condition of the already weakened vessels of the brain, which resulted in cerebral hæmorrhage. The relation in which I stood as pupil, relative, and friend of Dr. Athon, not to mention the fact that I was called from the city of Louisville to see him, and having expressed my diagnosis of his case, should have prompted the physicians in attendance to have invited me to be present at the autopsy. This was a want of professional courtesy of the most flagrant character, and a seeming petty jealousy manifested in the whole affair, which should be deprecated by all true men of science. I do not wonder that one of the *doctors* writes me that he is ashamed of himself.

I have no knowledge of the facts developed in the autopsy, save that shown in one of the secular sheets of Indianapolis,

lauding the learned physicians for finding a clot in the brain, as they had prognosticated. I wonder what they expected to find other than a clot after the second attack, which was followed by almost general paralysis and loss of consciousness, with almost constant coma and with nervous paroxysms and stertorous breathing up to the period of his death, which occurred some two weeks afterwards.

Be it distinctly understood, however, that the above condition did not exist after the first attack, there being scarcely momentary loss of consciousness, with only slight paresis and scarcely no loss of sensation, all of which is characteristic of passive cerebral congestion which has reached the second stage.

I understand there was discovered a small clot in the right hemisphere, which accounted for the first attack; but how do the learned gentlemen know that the small clot was not the result of an early hæmorrhage at the beginning of the second attack? as from the symptoms and morbid anatomical conditions there must have been paroxysmal hæmorrhages throughout the continuance of the second attack. Had I been present at the autopsy, I might have satisfied myself on this subject, but as the matter now stands, I will never be convinced, in the absence of ocular proof, believing, as I do, that there was nothing more than extreme vascular congestion as a cause of the first attack; and, furthermore, I am free to assert (providing I have been properly informed) that if, in addition to correct treatment, the surroundings had been different, and as a prophylactic measure his location had been changed to where he would have been kept in an even, cheerful mood, together with other moral and hygienic influences, he would have been living to-day, and would have survived many years yet in the enjoyment of comparative health, both physically and mentally. But now that he is gathered to his Fathers, let us cherish his memory as a souvenir worthy the consideration of all lovers of science, originality, and true greatness.

I have one other case to report which is of great moment, and in some of its phases similar to that of Dr. Athon's. I allude to the case of Captain Smith, whom I recently attended in this city. His age is seventy-three, and he has always en-

joyed good health, save malarial attacks at middle age, which left no permanent effect. He is a gentleman of wealth, and resides on upper Broadway. He is above medium height, heavily built, and of fair, ruddy complexion, and is what is known in temperament as the nervo-sanguine, with full habit.

I was hastily summoned to see him on the 10th day of March, 1876, and found him in an alarming and confused mental condition. He had been suffering from vertigo since the latter part of the preceding winter, but of which I had relieved him, since which period he had contracted a severe cold and suffered greatly from an engorged condition of the lungs, together with some portal congestion. I found, on careful examination, that his present condition was as follows: The tongue was slightly coated; pulse about forty, full, and regular; breathing somewhat accelerated; temperature 100°; pupils contracted; conjunctivæ injected; face red, and vessels of the head and neck turgid; there was confused and indistinct vision, with muscæ volitantes. There was slight paresis with loss of sensation, which was general. He said he had been attacked with vertigo shortly before my arrival, but had managed to work his way up stairs by holding to the banister, and through the assistance of some one of the family had reached his bedroom, but would have fallen had he not been assisted. He complained of great nausea, and had already thrown up some buttermilk which was taken a short time before my arrival. The bowels were constipated, the urine scanty and high-colored, skin dry and hot. Said he to me, "Doctor, I fear I am going to die, but I want you to do all you can for me." There was slight paresis of the organs of speech, yet he could enunciate, and desired his attorney sent for in order that he might devise his estate. I diagnosed his case as one of passive cerebral congestion, superinduced from the portal and lung trouble, together with the more remote predisposing tendency. The prognosis was rather unfavorable, on account of age and complication.

As to treatment, I first gave him a thorough emetic followed by a mercurial cathartic; ordered hot pediluvia with cold applications to head; also ordered ten grains each of the bromides of potassium and sodium, to be repeated every three hours.

Called next morning and found patient much relieved, paresis not so great as yesterday; pulse 60; temperature same as yesterday; urine plentiful; skin moist, etc. Treatment continued, with the addition of slight nourishment. The case continued in much the same condition, with slight variations under same treatment, till the seventh day, when there seemed to be a disposition to general and fatal congestion of all the organs involved, and in addition to the other complications, there was enormous enlargement of the right arm, which was continuous from axilla to ends of the fingers. Believing there was obstruction of the lymphatic system from some cause, and there being at the same time some distension in the portal region, I applied a large blister over that region, and put my patient at once on the use of five-grain doses of calomel, repeated every three hours till there was free evacuation from the bowels. This course acted like a charm, for at the end of fifteen hours the arm had resumed its normal appearance, and all the symptoms had abated. My patient slept well for seven or eight hours. So much for the "sheet-anchor" in the portal complications, to say nothing of the general effect. The remarkable complications with slight heart trouble was a peculiar feature in this case, and there was rapid breathing only prior to an effort to relieve the bronchii of the accumulated matter, which occurred many times during the day. At each effort for relief from coughing and scraitus, the vessels of the head and neck became frightfully turgid and extreme vertigo followed, which indicated that the vessels of the brain were in like condition, and that at each effort there was imminent danger of fatal cerebral congestion, effusion, or hæmorrhage into the substance of that organ. Fortunately, I had applied a blister over the region of lungs, which I had kept moist and sore by proper dressings, the effect of which had greatly relieved the congested condition, and the lungs were now assuming a resolvent tendency.

On the ninth day my patient seemed to be sinking from the effect of excessive expectoration of muco-purulent matter, also in danger of fatal cerebral effusion. It became necessary to increase the alcoholic stimulants in the shape of milk-punch and egg-nog. I also ordered large quantities of beef essence, etc.

I could not use quinine to any great extent, for fear of increasing the cerebral congestion. There was little change from the ninth to the thirteenth day, except the gradual mitigation of the head symptoms, and there still being portal trouble, I gave alterative portions of mercury, which brought relief. After the thirteenth day, I prescribed bromide of lithium, which produced marked relief of head symptoms, and by the seventeenth day my patient was convalescent, all the secretions being healthy, and the brain symptoms so effectually reduced as to require a preparation of quinine and phosphorus as a tonic and brain supporter. I continued the same with the addition of strychnia and electricity up to the twenty-third day, at which period I discharged my patient.

I ordered out-door exercise, such as long drives in the country, walking a certain distance each day, avoiding all excitement or excesses of any kind, by strict observance of which he may survive many years in the enjoyment of comparative health.

In conclusion, I will merely remark, that I regarded the case of Captain Smith as more complicated and less amenable to treatment than the case of Dr. Athon, yet Captain Smith did not afford an autopsy, nor did my friend, Dr. Athon, after the first attack, but no doubt Captain Smith's case would have resulted fatally with similar surroundings to that of Dr. Athon.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—*On the Application of Photography to Micrometry, with Special Reference to the Micrometry of Blood in Criminal Cases.* By J. J. WOODWARD, M. D., U. S. A., Washington, D. C.

Recent experiments in photographing the blood-corpuscles of man and other animals, lead me to propose photography as affording the means of making comparative measurements

more accurately, and with less expenditure of time than can be done by any other method.

The plan I propose is simply as follows: The blood is placed on a glass stage-micrometer and photographed with any convenient power, both blood and micrometer appearing sharply defined in the picture. The measurements are then made on the negative.

The stage-micrometer must be ruled on the upper surface of a piece of glass, and must have no thin cover. For mere comparative measurements any ordinary stage-micrometer in which the lines are equi-distant can be made to answer by simply removing its cover; but if absolute values are aimed at, the micrometer must be compared with a recognized standard, and its constant error ascertained. The stage micrometer used in the present series of experiments is the same described in a former paper.* It is ruled in hundredths, thousandths, and five-thousandths of an inch; and, so far as I have been able to ascertain by repeated comparisons of its parts with each other, the several divisions of each kind are equal throughout, five of the five-thousandths being equal to any one of the thousandths, and ten of the latter to any one of the hundredths.

On comparison with a standard scale belonging to the United States Coast Survey, by the contact method of Welcker, this micrometer proved, as I stated in the paper just cited, to have a constant error of +1.945 per cent.; that is, its lines are very nearly two per cent. too far apart; and this correction must, of course, be applied in the measurement of the photographs, as it was in the measurement of the corpuscles as seen in the microscope, which were published in the paper referred to.

The micrometer having been selected, it may be used for the measurement of blood dried in a thin film, of fresh blood in the moist state, or of dried stains soaked out by any selected method. In the first case the fresh blood should be spread on the micrometer by means of the edge of a glass slide, as pro-

*J. J. Woodward, on the similarity between the red blood-corpuscles of man and those of certain other mammals, especially the dog, etc. American Journal of the Medical Sciences, January, 1875, p. 151, and the Monthly Microscopical Journal, February, 1875, p. 65.

posed by Dr. Christopher Johnston, of Baltimore. A camel's-hair pencil is sometimes used for the same purpose; but it is a clumsy device, which no one who has been initiated into the proper method will ever employ. The blood thus spread may be photographed as seen uncovered, with a dry objective; but the best results are obtained with immersion objectives, to use which the specimen must of course be covered with a suitable piece of thin glass (.005″ to .008″ thick).

After two or three negatives have been made from the sample first selected, it is washed off, and a fresh specimen substituted, and so on. If it is desired to photograph fresh blood, a drop is put on the micrometer, a thin cover (of the thickness named) dropped on and allowed to press out the blood to the thinnest possible film. Excellent results may thus be obtained with the micrometer, almost as sharply defined as in the case of dried blood. If dried stains are to be examined, as in criminal cases, the fragments of dried blood are to be soaked out by any of the approved methods, on the same micrometer, just as if on an ordinary glass slide; and when a satisfactory preparation has been made, it may be photographed, together with the micrometer, as in the former cases. For the purpose of soaking out such stains, I myself very much prefer to use a strong solution of caustic potash, as described by Virchow in 1857.* This reägent dissolves the fibrin and sets the red blood-corpuscles free without materially modifying them.

In order to obtain photographs of the specimens thus prepared, which shall, at once, be well defined, and magnified sufficiently to render differential measurements easy, it is advisable to use immersion objectives of high power. I have employed the Powell and Lealand's one-sixteenth, and the one-eighteenth of Tolles, belonging to the Army Medical Museum, for this purpose, and, rejecting all eye-pieces and amplifiers, have aimed to obtain a magnification not less than one thousand diameters by distance alone. Of the two objectives named, the one by Tolles gives somewhat the sharper images, and has the flatter field. I have, therefore, used it for most of

*R. Virchow, Ueber die forenische Untersuchung von trockenen Blut-flecken. Virchow's Archiv, Bd. xii. S. 334.

the work. It is only just to repeat here that, although correctly named a one-eighteenth, this objective is of lower power than the wet front of the Powell and Lealand one sixteenth, belonging to the museum, which is really a one-nineteenth, although the dry front of the same combination is a one-sixteenth. The chief difficulty in making photographs of blood-corpuscles with this high power is to avoid diffraction fringes in the images; but this can readily be done by following the method which I have explained in detail in my paper on "Photographing Histological Preparations by Sunlight."* This method is extremely simple, and offers no difficulties to any one who has acquired a reasonable degree of skill in microscopical manipulation. It is my desire to put it at the service of all sincere workers in this direction, and I can not, therefore, view with indifference the publication of imperfect substitutes, which can only serve to waste the time of any one who may be misled into employing them. For this reason I feel it a duty to warn the reader against attempting to follow the methods described in two recent papers on this subject, published in the "Philadelphia Medical Times.† It would be waste of time to criticise these papers in detail. The methods described in them appear to have been devised without any intelligent consideration of the optical principles involved. I was not therefore surprised, on seeing some of their author's photographs of blood-corpuscles with high powers, referred to in his second paper, to find them lacking in definition, full of diffraction fringes, and, by reason of these faults, unfit for measurement or any other serious use.‡ Nor was I surprised to read, near the end

* Surgeon-General's Office, July 13, 1871. Reprinted in the American Journal of Science and Arts, October, 1871, p. 258, the Monthly Microscopical Journal, October, 1871, p. 169, and the British Journal of Photography, October 27, 1871, p. 507.

† Carl Seiler, Photographic Enlargements of Microscopical Objects. Philadelphia Medical Times, June 5, 1875, p. 563. By the same; High Powers in Microphotography, op. cit., February 10, 1875, p. 249.

‡ Since writing the above, I have seen a photograph of blood by Dr. Seiler which is free from diffraction. It is, of course, taken with a much *lower* power than the others. Even this picture is *not sharp*, as it would have been had a proper method been used.

of the second paper, that "no one who has not tried it can form an idea of the difficulties attending the application of high powers to microphotography, and a single tolerably good negative is often the only result of a hard day's labor."

By my own easy method, on the other hand, an average morning's work produces from fifteen to eighteen successful negatives. The time of exposure with the objectives named above, arranged to magnify the blood-corpuscles about 1000 diameters, is usually less than a second. A heliostat is therefore not *necessary* to obtain satisfactory results, as I have several times shown by taking such pictures quite as well without it as with it. The heliostat, however, is a great time saver, since without it the light must be reädjusted for every picture. I recommend any one about to experiment in this direction to procure one. An instrument which will answer every purpose can be extemporized for a few dollars out of a bit of looking-glass and the works of a Yankee clock; but even the cost of the admirable heliostat of Silbermann, as made by Dubosq, is only five-hundred francs, which will be more than repaid by the time saved during the first year, unless the time of the experimenter is not worth as much as that of an ordinary day laborer.

I also find it economical to employ a professional photographer in my dark room, and I recommend others to do the same. By this plan the microscopist is left free to devote his sole attention to procuring the best possible optical images, while the photographer has nothing to consider but the best possible chemical work. A much greater quantity of good work can be produced in this way in a given time, than is possible if the microscopist undertakes to do the photography himself. In this case he almost certainly sacrifices the optical part of the work to the photographic, or vice versa, and a reasonable degree of success is attained only by a wasteful expenditure of time.

Satisfactory photographs having been obtained, the corpuscles are next to be measured on the glass negatives. Paper prints are never exactly the size of the negatives. They spread a little if rolled; if not rolled, they may prove either a little

larger or a little smaller than the negatives. Moreover, this spreading or contraction does not take place equally in all directions, and is sometimes quite irregular. It is most accurate, therefore, to measure on the negatives. For this purpose I lay the negative, with its varnished film uppermost, on the ground glass of an ordinary photographic re-touching frame, illuminated from behind by a mirror, and measure the corpuscles under a magnifying glass by means of a transparent scale ruled in hundredths of an inch on a thin strip of horn. The accuracy of this scale is of course determined by comparison with a standard. To avoid parallax, I turn the ruled side of the scale down, so as to bring it in contact with the varnished film. It will very generally be found that the dried corpuscles are not perfectly round; the longest and shortest diameters must then be measured, and the mean taken. As the image of each corpuscle is measured, a dot of water-color is put on it, that it may not be measured a second time. This is readily washed off when the work is done. Extremely deformed corpuscles, and those which are obviously turned on edge, are not measured; but no others are omitted. As each corpuscle is measured it is entered on a check-list, which shows, when all on the negative have been measured, the number of corpuscles of each size. The sum of all the values, divided by the number of corpuscles measured, gives the average size of the images of the corpuscles in one one-hundredth of an inch. This average size, divided by the true magnifying power, gives the true average size of the corpuscles. To find the true magnifying power, I measure the distance of the lines of the micrometer from centre to centre on the negative, and divide by their true distance apart on the micrometer (that is, their nominal distance apart corrected by the ascertained constant error of the micrometer). The number of corpuscles on each negative, in my experiments, has ranged, with a single exception, from 50 to 175. Had the power always been just 1000 diameters, the measurements in one one-hundredths of an inch would have corresponded to one one-thousandths of an inch, and could be relied upon as correct to that figure. That is, writing the results in decimals of an inch, any error of observation would

have been less than one significant figure in the fifth decimal place. With slightly higher magnifications, the results are still more accurate. When it comes to computing the mean of from 50 to 175 such measurements, it can hardly be questioned that it is proper to carry out the mean results one decimal further, and it is not extravagant, therefore, to claim that the computed results are correct to the sixth significant figure. In the appended table, therefore, I give the average size of the corpuscles represented on each negative in millionths of an inch (together with the equivalent value in millionths of a millimetre, obtained by computation).

I feel justified in claiming for the method above detailed, that it requires less time for an equal number of measurements, and that it is more accurate than any of the methods heretofore employed for the micrometry of blood-corpuscles. I also claim for it that it is capable of useful application in the micrometry of many other objects for which great accuracy is desirable.

As to the time required, I suppose that twenty-five to fifty negatives, containing from 50 to 175 corpuscles each, can be made and the corpuscles measured in less than a quarter of the time necessary to measure the same number of corpuscles in the microscope by means of a glass eye-piece micrometer, and in less than a tenth of the time necessary if a cobweb micrometer be used.

As to accuracy, I have already mentioned the advantages of the plan proposed. I have next to refer to certain sources of inaccuracy in the method ordinarily employed. This method consists in the use of an eye-piece micrometer to which values are first given by focusing on a stage micrometer and comparing the two sets of lines; the stage micrometer is then removed and replaced by the slide to be measured. But the values thus obtained are only true so long as all the optical conditions under which they were procured are rigorously maintained; and unintentional errors may be introduced in various ways. Especially must it be noted that the least alteration of the cover-correction of the objective, whether by accident or for the purpose of improving definition, will be found to modify

the magnifying power of the objective, and, of course, to alter the value of the eye-piece micrometer. If, bearing this fact in mind, the observer first finds the best position of the screw-collar for the slide of blood to be measured, and then inserts the stage micrometer, to give values to the eye-piece micrometer, he will very often discover, when he replaces the blood-slide and begins to measure it, that the cover is of different thicknesses in different parts, and that he must either change the correction or be content to measure the corpuscles as seen somewhat out of focus.

Besides this source of error, to which too little attention has been paid, there is another, which appears to have been altogether neglected. Most of the published measurements of blood-corpuscles have been made on blood dried in thin films on glass. But, however daintily this operation is performed, a large proportion of the corpuscles become more or less elliptical in drying. Yet, in the micrometry of the blood-corpuscles, as practiced hitherto, they are measured in only one direction. Under these circumstances inaccurate results are of course inevitable.

With the comparatively low powers used by most of those who have published measurements of the blood-corpuscles, this source of error was naturally overlooked; but with a thousand diameters and upwards it becomes evident enough. In making the measurements reported in my former paper, I endeavored to escape this error by measuring only those corpuscles which appeared to be perfectly round. "Large and small forms were not searched for, but all the perfectly-formed corpuscles brought into view by the movement of the stage were measured as they passed under the micrometer, without selection, until the required number was recorded." I am now satisfied that the larger corpuscles are more frequently deformed than the smaller ones, and that, by pursuing the plan I did, I measured an undue proportion of the smaller corpuscles, and thus obtained averages somewhat less than the truth. In this way only can I account for the circumstance that the measurements now published are somewhat larger than those in my former paper, although the same micrometer was used, and with the utmost care.

Of course, since this source of error has been pointed out, it would be possible to measure the longest and shortest diameter of the elongated corpuscles in the microscope as well as on the photographs; but it would require a much greater expenditure of time.

It is my purpose, when time permits, to prepare a series of photographs of moist blood, and of blood soaked out from dried stains, as in criminal cases. A few such photographs accompany the present paper, to show the perfect feasibility of these applications of my method. Especially is the application to criminal cases worthy of practice. Perhaps I ought not to go so far as to say that no expert who goes into court to testify about blood-stains deserves to be listened to by a jury unless he takes with him photographs of the blood examined on a stage-micrometer; but certainly it must be admitted that hereafter the most trustworthy expert-testimony in such cases will be that which is corroborated by photographic evidence. The general introduction of this severe method of recording accurately the facts observed, is the more desirable because of late a spirit of exaggeration seems to have possessed certain experts, who either boldly claim, or in ambiguous language obscurely insinuate, that they possess the power of discriminating human blood from that of other animals in the dried stains which are submitted to examination in criminal cases.

The latest offender in this direction is Malinin,* who published last year a paper in which, by the measurement of corpuscles soaked out from dried stains, he claims to distinguish not only between human blood and the blood of many other mammals, but, under certain conditions, between human blood and the blood of any other mammal, even the dog. To make out his case, Malinin assumes the invariable accuracy of Carl Schmidt's† mean values of the diameter of the blood-corpuscles

* Malinin, Ueber die Erkennung des menschlichen und thierischen Blutes in trockenen Flecken in gerrichtlich-medi-cinischer Beziehung. Virchow's Archiv, Bd. lxv. (1875) S. 528.

† Carl Schmidt, Die Diagnostik verdächtiger Flecke in Criminalfällen-Mittau und Leipzig, 1848. When I published my former paper, as I then stated in a foot-note, I had not been able to see a copy of this paper; but one has since been received at the Library of the Surgeon-General's Office.

of man and certain mammals, which he republishes without credit, as if they were his own. It is precisely this assumption of invariability which leads him astray. The truth is that not only do the individual corpuscles in every drop of blood vary considerably in size, but, as might be anticipated from this very fact, the average size obtained by measuring a limited number of corpuscles (50 to 175, still more in the case of but 10 to 50, as usually practiced) varies considerably, not only between different individuals, but also between different parts of the very same drop of blood.

Now, it is true, as was shown by the measurements of human and dog's blood, published in my former paper, that the mean diameter of the corpuscles in a given sample of human blood is often rather larger than the mean of a sample of dog's blood selected for comparison. I may even go further, and say that the average of all the measurements of human blood I have made is rather larger than the average of all the measurements of dog's blood. But it is also true that it is not rare to find specimens of dog's blood in which the corpuscles range so large that their average size is larger than that of many samples of human blood. This was clearly shown by the measurements published in my former paper, as it is by those which are appended to the present paper, and will be by any fair series of comparative measurements.

Thus I note here with pleasure that, since the publication of my former paper, Professor Gulliver, whose measurements of blood-corpuscles are those most frequently cited in English works, has published an extended and revised table of measurements of the blood-corpuscles of vertebrates, prefaced by some remarks, in the course of which he expressly affirms the futility of attempting to distinguish human blood in criminal cases.*

* George Culliver, Observations on the Sizes and Shapes of the Red Corpuscles of the Blood of Vertebrates, etc. Proc. of the Zoölogical Society of London, June 15, 1875, p. 474. The passage referred to in the text is on page 484: "As before noticed, the magnitude of the corpuscles in a single species not excepting the human, is liable to variations within certain limits; and there commonly appear in one field of vision of the same corpuscles differences amounting to at least one-third larger and smaller than the average. Hence, as regards the medico-legal, question, however truly a careful observer (Dr.

I conclude this paper with a table of measurements of the red corpuscles of man, the dog, and the guinea-pig, as dried in thin films on the glass micrometer, and measured by the photographic method above described. A print of each negative accompanies this paper, and copies of a selection of them will shortly be sent to convenient places in the larger cities, with the view of making them accessible to those who may be interested in this question.

The table gives the number of corpuscles measured on each negative, the diameter of the maximum and minimum, and the mean. The maxima and minima are given, like the mean, in millionths of an inch, because, although the measurements were actually made in hundredths of an inch, which, with about one thousand diameters would correspond to about hundred-thousandths, yet the measures when corrected by the true magnifying power seldom remained a whole number, and the fraction is expressed by an additional decimal.

The measurements of human blood are from twenty-two negatives, taken from nine drops of blood obtained from eight individuals, the whole number of corpuscles measured being 1766. The maximum size measured was 396 millionths of an inch in diameter. But two corpuscles of this great size were measured. The smallest corpuscle measured was 216 millionths of an inch in diameter, and but a single corpuscle of this minute size was measured.

The number of corpuscles on each negative ranges from 50 to 140, except on a single negative, which presents only 26 corpuscles. This happens to be a group of large corpuscles the mean diameter of which is 343 millionths of an inch, being the largest average diameter obtained on any negative. The smallest average was 309 millionths of an inch, being the mean of 90 corpuscles.

Joseph G. Richardson, Monthly Micros. Jour., September, 1874) may have distinguished, by comparative measurements of the corpuscles, stains of human blood from those of the sheep or ox, this kind of diagnosis, as Dr. J. J. Woodward observes (Monthly Micros. Journ., Feb., 1875), would be ineffectual in some probable and more possible cases. It should be borne in mind, too, that in the apyrenæmata" (*i. e.*, the mammalia) "the membranous bases of the blood-disks, when deprived of their color by maceration in water, are about a third smaller than the unaltered corpuscles."

TABLE I.—*Measurements of Human Red Corpuscles from Eight Individuals.*

	No. of Corpuscles measured.	Diameters of Human Blood.			
		Dec. of an English Inch.			Dec. of Millimetre.
		Maximum.	Minimum.	Mean.	Mean.
1. Drop H, Neg. 849	90	.000363	.000255	.000309	.007848
2. " G, " 846	55	.000353	.000245	.000311	.007899
3. " E, " 835	70	.000339	.000261	.000312	.007925
4. " D, " 828	140	.000346	.000255	.000314	.007975
5. " H, " 848	50	.000343	.000274	.000315	.008001
6. " C, " 824	50	.000337	.000273	.000316	.008026
7. " G, " 840	81	.000372	.000265	.000316	.008026
8. " G, " 841	104	.000363	.000255	.000317	.008052
9. " H, " 847	80	.000363	.000255	.000319	.008102
10. " D, " 827	90	.000364	.000218	.000320	.008128
11. " A, " 820	75	.000359	.000230	.000326	.008280
12. " B, " 822	105	.000368	.000258	.000326	.008280
13. " I, " 854	80	.000353	.000294	.000326	.008280
14. " C, " 823	75	.000360	.000261	.000326	.008280
15. " C, " 825	75	.000382	.000282	.000327	.008306
16. " B, " 821	105	.000368	.000285	.000227	.008306
17. " A, " 818	80	.000359	.000278	.000328	.008331
18. " I, " 855	70	.000382	.000284	.000331	.008407
19. " D, " 826	95	.000371	.000285	.000334	.008483
20. " F, " 837	60	.000396	.000216	.000335	.008509
21. " A, " 819	110	.000396	.000276	.000337	.008560
22. " E, " 836	26	.000378	.000288	.000343	.008712

TABLE II.—*Measurements of Red Corpuscles of the Dog, from Five Individuals.*

	No. of Corpuscles measured.	Diameters of Dog's Blood.			
		Dec. of an English Inch.			Dec. of Millimetre.
		Maximum.	Minimum.	Mean.	Mean.
1. Drop A, Neg. 815	111	.000352	.000257	.000296	.007518
2. Drop B, " 830	107	.000346	.000237	.000296	.007518
3. Drop E, " 859	120	.000363	.000245	.000298	.007569
4. Drop B, " 829	175	.000346	.000255	.000298	.007569
5. Drop E, " 860	120	.000353	.000255	.000301	.007645
6. Drop A, " 816	120	.000342	.000247	.000305	.007747
7. Drop C, " 831	152	.000355	.000246	.000308	.007823
8. Drop C, " 833	140	.000359	.000258	.000310	.007874
9. Drop D, " 857	100	.000353	.000265	.000310	.007874
10. Drop D, " 858	111	.000353	.000255	.000310	.007874
11. Drop A, " 817	80	.000361	.000238	.000315	.008001
12. Drop C, " 832	135	.000350	.000276	.000317	.008052
13. Drop C, " 834	100	.000378	.000270	.000340	.008636

TABLE III.—*Measurements of Red Corpuscles of the Guinea-pig from One Individual.*

	No. of Corpuscles measured.	Diameter of Guinea-pig's Blood.			
		Dec. of English Inch.			Dec. of Millimetre.
		Maximum.	Minimum.	Mean	Mean.
1. Drop A, Neg. 852.....	111	.000363	.000265	.000308	.007823
2. Drop A, " 850.....	100	.000372	.000265	.000310	.007874
3. Drop A, " 851.....	90	.000353	.000253	.000313	.007950
4. Drop A, " 853.....	100	.000382	.000265	.000314	.007975

The measurements of dog's blood are from thirteen negatives taken from five drops of blood, each from a single individual. The largest corpuscle measured was 378 millionths of an inch in diameter; the smallest 237 millionths of an inch. The negatives contain from 80 to 175 corpuscles each, the total number of corpuscles measured being 1571. The largest average size for any negative was 340 millionths of an inch, being the mean of 100 corpuscles. The smallest was 296 millionths of an inch, being the mean of 111 corpuscles. It will be observed that on seven of the negatives of dog's blood the corpuscles have an average diameter smaller than the corpuscles on any of the negatives of human blood, while on the other six the average size of the corpuscles proves to be larger than the smallest average for the human blood, and the largest average on any one negative of dog's blood, exceeds that for any negative of human blood except the very largest. I call attention also to the very diverse averages obtained with both the human and the dog's blood from different parts of the very same drop.

The measurements of guinea-pig's blood are from four negatives only, made from different parts of a single drop of blood. The total number of corpuscles measured was 401. One of the negatives gives an average one-millionth of an inch smaller than the smallest average for human blood; all the others give averages larger than the smallest for human blood. The variations in size are not so great as in the negatives either of dog's blood or of human, but, as they are taken from a single drop,

it can hardly be assumed that this is a characteristic feature of the blood of the guinea-pig. I think no one could have told from the examination of this drop of blood whether it belonged to the guinea-pig, the dog, or man.

I propose to make a number of other negatives of the blood of the dog and the guinea-pig at an early day, with a view to additional measurements; but those now published are, I must think, quite sufficient to demonstrate the reckless temerity of those who would attempt to discriminate human blood, even on nicely-dried slides prepared with every possible care to preserve the shape of the corpuscles.—*Phila. Med. Times.*

ART. II.—*The Diapedesis of Leucocytes, and its Present Pathological Significance.* By. N. B. SIZER, M. D.

Prior to the investigations of Virchow, the condition of Pathological Histology was most unsatisfactory; hypothesis was substituted for fact, and theory for observation.

The phenomena of inflammation especially were ill understood; pus was found in a wound or abscess, and its presence was accounted for by that "opprobrium scientiæ," Spontaneous Generation, which, let us hope, has now found its "last ditch" among the "bacteria."

Waller, in 1846, had indeed observed and recorded the emigration of white blood cells, but it appears that his article attracted no notice, and lay buried for years in the pages of the Philosophical Transactions.

While we admit Virchow's distinction as the founder of the new pathology, others undoubtedly labored to prepare the ground before him.

Schleiden and Schwann had established the place of the "cell" for both animal and vegetable life, and had clearly defined its position as the "essential morphological unit," to quote an expression of Kölliker.

Reichert, Remak, and Kölliker, while studying the segmentation of the vitellus, had proved that in the embryo, as well as

in the adult, no cell is derived from a "blastema," since all are descendants of the cells of the blastoderma.

From this time forward the cellular theory has been sharply defined and demonstrated by researches in normal histology and embryology. Pathology alone clung to the Hunterian dogma of "plastic exudation" to explain the rationale of morbid processes.

Two notable exceptions may be mentioned, however. Goodsir, of Edinburgh, as far back as 1845, insisted upon the activity of cells in inflammation, and was the first to employ that happy metaphor, "cell districts." Kuess, of Strasburg, showed, about the same time, that inflammation could be excited in non-vascular tissues, and hence concluded that the *essential* phenomena occurred in the tissue elements themselves, the vessels being of secondary importance. But Kuess combined much error with some truth, and imagined inflammation to be the melting down of normal cells into an amorphous liquid mass, in which the so-called "inflammatory globule" appeared, followed by cicatricial fibres.

In 1851 Virchow's first publications on the connective-tissue group appeared, in which he showed that a cell belonging to any class of this group may undergo metamorphosis of both form and chemical composition, so as to transfer it to any other class of the group, and that the same is true of the inter-cellular substance; it may change its amorphous form, and become fibrillar, striated, or reticular.

Inflammation, according to Virchow, is proliferation of the connective tissue cells, which, under the stimulus of irritation, swell, draw in their processes, and give birth to a brood of soft, young, round cells, with a vesicular nucleus, thus resembling in every respect the embryonic cells from which the parent cells are descended. These young cells are endowed with a high degree of activity, and undergo rapid evolution, changing in some places into pus, elsewhere becoming cheesy or tubercular infiltration, or undergoing a high degree of development, appear in varied form or neoplasms.

There are, then, no such things as "specific cells"; no element of a tumor can be considered as specific, as having a form

whose prototype can not be found amongst normal tissue elements, because the abnormal cells are descended from normal cells.

This fact takes away every histological argument from those who imagine that disease is a parasite grappling with and living on the economy.

While arguing the question on merely histological ground, Virchow has been able to prove that all morbid processes set in motion the same cellular activity as physiological phenomena, but always with this memorable difference; the abnormal activity manifests itself either in a turbulent fashion, irregular, tumultuous (if I may use the expression), or out of its proper place (heteropic), or at an improper time (hetero-chronic).

Since Virchow's first publication, many improved methods of observation have been of essential service in elaborating his views. Especially is this true of the art of preserving cell life for many days by iodized serum and other indifferent media, with Schultze's warmable stage, and Von Recklinghausen's moist chamber. Stricker's gas chamber and Harting's apparatus are of great service, when we desire to expose living tissue elements to the action of electricity and the various gases while under the microscope.

Through these means we know that Schwann's idea of a cell must be essentially modified, that neither cell-wall nor nucleus is a *sine qua non;* that a cell in its simplest form is merely a particle of that homogeneous, jelly-like material called protoplasm.

Another important point is the "automatic" action of cells, that is, many of them possess the power of independent movement, and this fact brings me directly to my subject, the Diapedesis of Leucocytes.

The word "leucocyte" was invented by Robin, of Paris, to designate all those colorless cells otherwise known as pus, mucus, lymph, chyle, and white blood corpuscles, which we know are impossible to be differentiated from each other under the microscope.

If the cornea of a living frog be quickly excised, placed in an indifferent medium in a "moist chamber" under an immer-

sion objective, we may be rewarded by our first sight of that important element, the wandering connective-tissue cell. We find a few isolated, pale, glistening bodies, round or irregular in form, and after some minutes of closer watching we may easily satisfy ourselves that these bodies are constantly protruding and retracting delicate pseudopodial processes, and slowly moving about through the tissue. These are Recklinghausen's famous "wandering cells." After half an hour's waiting, the fixed corneal corpuscles appear as very pale, dull spots, more or less stellate in shape, touching each other at the tips of the radiating processes. These cells exhibit under ordinary circumstances no movement whatever. The movable cells are identical in *shape*, *size*, *appearance* and *amœboid motion* with the leucocytes, and may be demonstrated in many tissues in the same way.

The researches of Cohnheim, of Berlin, have attracted the widest attention, and bid fair to revolutionize our notions of pathology. In his paper in "Virchow's Archiv" (Band 40, Seite 1, 1867, "Ueber Entzuendung and Eiterung"), he describes his experiments nearly as follows: A frog having been paralyzed with woorara, a small incision is carefully made in the abdomen, and a loop of intestine gently drawn out, great care being taken not to compress the vessels in the wound. The mesentery is then examined with a high-power objective, and the irritation of the air being sufficient to arouse it, we soon begin to observe the phenomena of inflammation.

We notice the increased rapidity of the current, the crowding of the blood cells into the dilated capillaries, the gradual production of "stasis," and the so-called "still-layer" of leucocytes adhering to the inside of the wall of the vessels. By careful watching we notice that the connective tissue between the vessels is rapidly filling up with wandering cells, whose numbers increase continually, as they glide along in all directions, protruding and retracting their pseudopods.

If we are blessed with patience we may see the emigration of a leucocyte. A member of the adhering "still-layer" pushes out a process against the vascular wall, its tip passes through the wall and protrudes outside. The cell-protoplasm appears

to run into the process until the cell is dumb-bell shaped, half being inside and half outside of the vessel. The intra-vascular portion decreases, while the extra-vascular portion increases in size, until the whole of the cell is outside the vessel, and finally detaches itself entirely, and glides away, a wandering cell, through the tissues.

Like their prototypes, the amœbæ, these "vagabonds" appropriate any colored granules in their track, and may thus be marked, or "stuffed," as our German friends call it. If we have previously injected small quantities of water containing cinnabar, carmine, or aniline-blue into the subcutaneous lymph-spaces of our frog, we shall find the "still-layer" in the mesentery containing many leucocytes, with colored particles in their interior. They can thus be easily watched while emigrating as "pus cells" into the tissues.

Those who take the most advanced ground on the emigration side insist that *all* pus cells, alike in non-vascular and vascular tissues, are either emigrated white blood cells or their descendants, as they have been observed to proliferate rapidly after emigration. Stricker, of Vienna, and others, have claimed that in non-vascular tissues, and perhaps occasionally in others, pus *may* also be formed by the proliferation of connective tissue cells.

In 1862, Von Recklinghausen demonstrated an internal epithelium lining lymphatics, by the use of silver staining. In 1863, Oedmanson, of Stockholm, applied the same method to demonstrate pavement epithelium elsewhere in the tissues, and in 1865–6, a similar endothelium was described and demonstrated in the blood capillaries by several observers.

Specimens, successfully prepared and stained by carmine, show the capillaries lined with a single layer of spindle-shaped epithelial cells, each having a nucleus stained with carmine, the cells arranged side by side like pavement epithelium, the intercellular sutures being stained black with the silver, and the cell-body being unstained.

Here and there we notice irregular, rounded forms in the sutures, unstained either by silver or carmine, and standing like transparent islands in the black-stained seam, recalling at once to our minds the wormian bones of the cranium.

These are the so-called stigmata or stomata, varying in diameter from 1-400 to 1-150 of a millimeter, and are supposed to be the openings by which the cells emerge. Sometimes the stomata also are blackened by the silver, but the cause is not known.

Since Cohnheim's first publication, the fact of diapedesis has been established independently by so many investigators, that it is generally conceded on all sides that migrated leucocytes make up the greater part of the pus of an inflamed spot, but the exact mode of transit is still in doubt.

Cohnheim's original idea was that the cells passed through by their amœboid movement alone, but he now thinks that Hering and Schlarewsky may be justified in comparing it to the dialysis of colloids.

In a later work (1874) Cohnheim calls attention to a condition first pointed out by Lister—viz., an altered, softened, more porous condition of the vascular walls in inflammation, so that a slight increase of arterial tension would suffice to force out the contents of the vessel. This, however, is a minor point; the important question being, Are *all* pus cells emigrants, or are *some* proliferated connective tissue cells?

Stricker and his side have great difficulty in establishing their view; for example, the frog's tongue is easily examined and abounds in connective tissue cells, but no very marked changes can be seen in them during inflammation.

"Stricker," says Cohnheim, "observed this object *ten* hours consecutively, and rose from his microscope having observed not a single cell division, not even a progressive constriction in any cell."

Stricker ascribes this failure to the tardiness of proliferation, and obscuration of the field by the crowding of migrating cells into the part inflamed. He has, therefore, abandoned the tongue and betaken himself to the cornea, in which he thinks he has observed (in conjunction with his pupil, Dr. Norris, of Philadelphia,) the proliferation of the stellate corpuscles, and the formation of pus cells. ("Studien aus dem Institut für Experimentelle Pathologie in Wien, aus dem Jahr 1869.")

Keratitis being excited in several frogs, the corneæ are

excised at intervals, stained with gold ter-chloride to render the corpuscles visible, as well as any changes which they may have undergone.

Keratitis may be excited in various ways: The lapis infernalis or actual cautery, incision, a seton inserted in the cornea, or passed through the globe of the eye, and setting up panophthalmitis with secondary keratitis.

The changes, according to Stricker and Norris, are described by Burdon Sanderson in Holmes' System of Surgery, volume v., art., "Inflammation," as follows: After a few hours the corneal corpuscles draw in their processes, and in sixteen hours they swell up, and nuclear division goes on rapidly, the corpuscles assuming the form of those large nucleated masses of protoplasm, the so-called "giant cells" of Virchow, the "plaques à noyaux multiples" of Lebert.

Further observation is prevented by the crowd of migrating cells flocking in from the limbus.

Following Cohnheim's description of this process, the corpuscles do not proliferate, but after drawing in their processes they rapidly undergo degeneration, their protoplasm becomes granular, and many vacuoles appear in it. The nucleated "giant cells" are merely the result of the aggregation of many wandering cells. In keratitis secondary to panophthalmitis, *no change whatever* occurs in the corneal corpuscles, they not even draw in their processes.

Cohnheim's views have received powerful support from the researches of Professor Axel Key and Dr. C. Wallis, of Stockholm, published in Virchow's Archiv, Band LV. They have examined keratitis in several hundred frogs, and coïncide with Cohnheim in every important particular.

Professor Boettcher, of Dorpat (in Virchow's Archiv, Band LVIII, 1874) says that in cases of keratitis centralis the pus cells must be of local origin, as there is no peripheral clouding of the cornea, or circum-corneal injection, to indicate migration from the limbus.

Cohnheim in reply makes a good point by saying that no one has claimed that his description of secondary keratitis is erroneous in any particular; that this form of keratitis is admitted

to be genuine, and, therefore, that any change in the corpuscles, when keratitis is otherwise excited, can not be reckoned an essential and characteristic phenomenon of the process. He explains the apparent local formation of cells in central keratitis by mentioning the fact, that he has often observed the in-wandering of the cells from the conjunctival secretion through an abrasion of the corneal epithelium.

Boettcher, in reply ("Ueber die circumscripte Keratitis," Virchow's Archiv, February 15, 1875), says that in eight cases where he removed the "membrana nictitans" in frogs, and induced central keratitis, he found that the frogs kept their heads under water generally, thus preventing any emigration from the conjunctival sac. In these cases the same results were found as before, thus seeming to sustain the theory of the local origin of the cells.

He also refers to an observation of Professor Eberth, of Zurich," (Untersuchungen aus dem Phthologischen Institut zu Zurich, 1874), who also objects to the theory of immigration through abraded epithelium.

Boettcher, however, seems unwise in quoting Eberth, who in the same monograph, claims that even in central keratitis all the pus cells have come from the corneal margin, which is taking more advanced ground than even Cohnheim himself.

Prof. J. Arnold, of Heidelberg, in Virchow's Archiv, February 15, 1875, gives his method of demonstrating diapedesis. He injects cinnabar into the blood vessels, to mark the leucocytes as already described. He then excites inflammation in the mesentary, tongue or bladder of the frog. After twenty-four hours the animal is bled to death, and injected from the aortic bulb, with a solution of silver nitrate in water, of the strength of one-twentieth of one per cent.

His results are as follows: The endothelium and stomata are mapped out as usual; the migrating cells escape only by the sutures or stomata; colored fluids and insoluble particles pass out through the same pores, and in the latter case the particles arrested *in situ* demonstrate the cell borders most beautifully; colloid substances leave the vessels in the same way, proved by injecting colored glue or gum; after some time the stomata become enlarged, and the red cells also leak out.

These brilliant results have been confirmed by another independent worker, Purves, at the Physiological Laboratory of Utrecht.

Dr. George Thin, of London, a distinguished microscopist, has gone into the subject exhaustively in the "Edinburgh Medical Journal" (November, December, 1875, January, February, March, 1876) with the following result: In a tissue undergoing inflammation, the order of the phenomena is: swelling, death and disintegration of the cells of the part; exudation of plasma, and emigration of red and white blood-cells.

Repair takes place by the organization of the plasma into the inter-cellular tissue, the emigrated cells developing into the normal cells of the part as needed. He thinks that there is no proof that any of these cells undergo retrogressive metamorphosis, and become leucocytes. Hence, all pus is made up of emigrated leucocytes, and he agrees with Cohnheim.

The latest communication is from Stricker. (Archives of Ophthal. and Otol., vol. V, No. 1, April, 1876). He excites central keratitis in kittens with potassa fusa. After twenty-four hours the eye-lids are excised, and the living cornea stained with silver nitrate in substance. After some minutes the cornea is excised, laid in water acidulated with acetic acid, and in twenty-four hours is removed to alcohol, when it is soon ready for sections. He finds distinct segmentation of the corneal corpuscles, and of the contents of the nerve fibres. He admits that it is difficult to prepare a specimen showing these things well. This, with other weak points, will doubtless be criticised by the other side.

Resumé.—1. The greater part of all pus, wherever found in the body, either in vascular or non-vascular tissues, is made up of emigrated white blood cells or their descendants.

2. Whether the normal cells of the part proliferate in inflammation is at present *sub judice;* the preponderance of evidence is against it.

3. While emigrating, the leucocytes rapidly proliferate in the tissues.

4. The emigrated cells are capable of undergoing metamorphosis, and of being transformed into fixed elements, similar to

those of the tissue in which they are situated; this is shown in the healing of wounds, where the granulation tissue, which we now know to be made up of emigrated cells and their descendants, is transformed by contact with the normal parts into connective tissue and epithelial cells.

5. Hence, organization is accomplished by the fixation of the wandering cells, and their transformation into cells like those of the neighboring tissues.

6. When suppuration occurs on mucous or serous surfaces, while most of the pus is composed of leucocytes, the participation of the local epithelium in the process is extremely probable.

7. The youngest epithelial cells of a tissue are in all probability nothing but organized wandering cells.

8. Diapedesis is believed to be as prominent a phenomenon in the so-called chronic forms, as in ordinary acute inflammations.

9. Morbid growths generally, which do not belong to the connective tissue type, are believed by many to be intimately connected with the emigration of cells at an irritated point.

10. The recurrence of malignant growths after careful extirpation is believed to be due to the emigration of the young cells of the tumor, which possess an undoubted power of amœboid motion.

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[*Pro. of Med. Society of County of Kings.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—*Spinal Abscess.*

Mr. J., aged seventy, by occupation a farmer, and a man of remarkable vigor of constitution up to November last, when I was called to see him on account of a dull pain in the right lumbar region, extending along the course of the sciatic nerve. In all other respects he seemed perfectly well, and as he had been subject to slight rheumatic pains, I regarded the present trouble as being of the same character, and prescribed in accordance with that view. Dr. P. W. Anderson, of this place, who saw him twice during my absence from home, also entertained the same view of the case.

There were absolutely no symptoms in the early history of the disease upon which to base a correct diagnosis, simply a pain in the right lumbar region, not circumscribed, but shifting, and over the sciatic nerve where it passes out of the pelvis below the pyriform muscle. There was an entire absence of any febrile disturbance, and the patient was disposed to attribute all the inconvenience he suffered to a twist he had given his back some time before. It is needless to say there was no improvement under the treatment.

Gradually locomotion became more and more difficult, the appetite impaired, the bowels sluggish, tongue dryish, pulse accelerated, quotidian rigors followed by flushing of the face in the evening, and free perspiration at night. These symptoms aroused my fears of suppurative inflammation. I was unable to ascertain its seat, but thought it possible I might have a case of pyonephrosis with occlusion of the ureter, thus preventing any show of pus in the urine—a diagnostic symptom of great importance in that disease.

This view was rendered the more plausible in consequence of the development of slight cystitis some time previous, followed by partial suppression of urine.

I ought, perhaps, to say that for the first six weeks of my

attendance upon this case, no complaint was ever made by the patient of any urinary difficulty. He then called my attention to the frequent desire to micturate, the difficulty and pain attending it, and a slight incontinence. The urine was highly acid, color reddish-yellow, specific gravity 1024, free from albumen, and depositing a large amount of amorphous urates on cooling.

On instituting examination per rectum, a very decided enlargement of the prostate gland was discovered, especially of the lateral lobes, as I had anticipated would be the case from the symptoms. The fact was now learned that for four years some trouble had been experienced in passing his water, just sufficient to make him cognizant of something wrong, but not grave enough to excite any alarm.

The gravity of the urinary symptoms seemed to increase pari passu with the increase of fullness and swelling in the lumbar and hypochondriac regions, which had become quite perceptible both to sight and palpation. The right lobe of the liver could be distinctly felt through the abdominal parietes, and over it there was marked tenderness, and also in the right inguinal region, but an almost entire immunity from suffering, except when pressed upon. No fluctuation could be detected; decubitus right lateral, or dorsal, but generally the former; temperature 97 3-5, and what seems a little remarkable, the temperature never rose above 98° in the axilla, even when the pulse was 110. In order to insure correctness in this respect, I took observations with different thermometers.

Various solutions of the difficulty suggested themselves, such as pyonephrosis with occlusion of the ureter, perinephritic, perihepatic, or spinal abscess. It may strike some as showing a great want of acumen in not being able to differentiate these diseases in their incipiency before the detection of a fluctuating tumor; but it must be remembered that these diseased conditions are relatively infrequent, and, moreover, that the diagnostic differences are by no means so marked that errors may not occur. Up to this time there were positively no symptoms sufficiently clear to *localize* the diseased action that was most

certainly going on, as clearly and unequivocally announced by the constitutional disturbance. Matters continued to progress pretty much in the same way for some time longer, when I detected in the now general fullness of the right side a distinct circumscribed tumor of an oblong shape, extending obliquely upwards and backwards, from a point about midway between the post-superior spinal process and crest of the ilium toward the spinal column, but not reaching it by two or two and a half inches. This tumor or swelling gave unmistakable evidence of fluctuation, was free from all discoloration, and admitted of any amount of manipulation without much pain. When percussion was made immediately over the liver, there was always great pain. I determined at once on making this discovery to operate by aspiration. On introducing the smallest-sized needle and canula obliquely upward and forward, I distinctly felt the needle enter the sac, and was gladdened by seeing the pus begin to flow freely. I removed five ounces at this operation. Mr. J. expressed himself quite relieved. On the following day I removed six ounces in the same way, using the same sized canula of the aspirator, manufactured by that most excellent cutler, Mr. J. H. Gemrig, of Philadelphia.

I must confess I was somewhat disappointed in the quantity, and believing that I had directed the needle too high and was only removing the top of the abscess, I entered straight into the sac with a larger sized needle, and, by inclining the canula a little downward and backward, succeeded in completely emptying the sac, removing thirty-six ounces of odorless, creamy-white, but rather thin pus. After the operation the abdominal walls became perfectly flaccid, the liver receded to its normal position, and the tenderness was almost completely relieved.

While I do not believe that in this case, owing to the advanced age of the patient and complications of a most serious character, a favorable result was possible, yet, in a younger subject and under more auspicious circumstances, we might hope, by means of the aspirator in case of spinal abscess, to accomplish some permanent good, provided the disease could be diagnosticated before it had committed irreparable ravages. To show the hopelessness of former methods of treatment of this

disease, I quote the language of Professor Gross (Sys. Surg., vol. ii., p. 324): "If the affection be left to itself, it will be seen to destroy life, and the event will hardly be any the less certain if it be surgically interfered with."

Immediately after the evacuation of the abscess, the cystitis rapidly increased in extent and violence. Previous to this time, the urine had continued to give an acid reäction, being drawn regularly by the catheter, and was nearly free from mucus. This latter so increased in quantity that it would no longer flow readily through the eye of an ordinary French gum catheter. The urine became highly ammoniacal and excessively fœtid from decomposition, notwithstanding my constant efforts to keep the bladder washed.

It is not my intention to enter into the details of treatment or to invite attention to it, except in one particular. Finding everything fail to afford relief from the decomposing urine, it occurred to me that in view of its well-known properties of arresting fermentation and preventing change in organic matter, a solution of salicylic acid offered the best chance. I therefore used a wash made by dissolving ten grains of the acid in eight ounces of hot water, and cooling it sufficiently for an injection, and I think with good results, but not so decided as I had hoped. I have never seen the remedy recommended for any such purpose, but think it worthy of further trial.

Death took place on the ninth day after the first operation. It is a matter of regret to me that no autopsy could be held, as it was the only possible means of establishing a positive diagnosis. I think I am warranted in regarding the case as one of spinal abscess, however rare such an occurrence may be in one so far advanced in life. The difficulty of arriving at a correct opinion in such cases is strikingly illustrated in a case presented by Dr. Francis Delafield before the New York Pathological Society, and reported in the "New York Medical Journal" for February, 1876. The patient, a woman aged thirty-nine, entered Roosevelt Hospital October 1, 1875. On the 28th a diagnosis of fæcal impaction was made. It does not appear from the report that any conclusion had been reached prior to the last date. On the 20th of November abdominal aneurism

was diagnosed; shortly afterwards caries of the spine with psoas abscess; then post-renal abscess, and finally perihepatitis. The autopsy revealed the remains of an ileo-cœcal abscess.

Here was a case in one of the best conducted hospitals in New York, under observation for five months, and yet a failure to make a correct diagnosis.

The clinical thermoscope of Dr. Seguin might have rendered valuable service by leading to the discovery of the seat of morbid changes in its early and remediable stage, and I am sorry I did not apply it in the case above reported.

NOTE.—This valuable paper was received without caption, address, or signature.—E. S. G.

ART. II.—*Analysis of the Obstetrical Service of the Louisville City Hospital, for the Year* 1875. By ROBERT N. TAYLOR, M. D., late House Physician to the Louisville City Hospital.

Women delivered from January 1, 1875, to January 1, 1876, 92; children born from January 1, 1875, to January 1, 1876, 95; number of twin labors, 3. In two of the twin labors the children were both females; in the other case, both children were males. Number of male children born alive at full term, 46; male children born dead at full term, 1; male children born alive at seven and eight months, each, 2; male children born dead at six and a half and seven months, 2. Total number of male children, 51.

Number of female children born alive at full term, 40; female children born dead at full term, 1; female children born alive at eight months, 1; female children born dead at eight months, 1; female children born dead at six and a half months, 1. Total number of female children, 44. Still-born males, 3; females, 3.

Positions and Presentations.—Vertex, left occipito-acetabular, 65; vertex, right occipito-acetabular, 24; footling presentation, right dorso-sacro iliac position, 1; footling presentation, left dorso-acetabular position, 1; breech presentation, left sacro-

iliac position, 2; breech presentation, right sacro-iliac position, 1; breech presentation, right dorso-acetabular position, 1.

Duration of First Stage of Labor.—From one to twelve hours in 70 cases; from twelve to twenty-four hours in 14 cases; from twenty-four to forty-eight hours in 8 cases. Average duration of first stage 9⅛ hours.

Duration of Second Stage of Labor.—From one-half to three hours in 79 cases; from three to six hours in 9 cases; from six to fifteen hours in 4 cases. Average duration of second stage 2 hours.

Multipara, 38 cases; primipara, 54 cases.

Complications.—Placenta retained and extracted from uterus by hand in 8 cases; hour-glass contraction of uterus after the administration of ergot, and placenta removed by hand, in 2 cases; post-partum hæmorrhage in 14 cases.

In one case of post-partum hæmorrhage, persulphate of iron, and in another case, tincture of iodine was injected, in each instance producing immediate uterine contraction, after all other means of arresting the hæmorrhage had failed.

In still another case of post-partum hæmorrhage, compression of the abdominal aorta was resorted to successfully to check the flow of blood, whilst other means were being used to produce uterine contraction.

Post-partum hæmorrhage on ninth day in 1 case; cord around child's neck once in 7 cases; cord around child's neck three times in 2 cases; cord around child's neck twice in 3 cases; cord around child's arm in 1 case; great rigidity of os uteri in 2 cases; malposition of head, transverse to outlet, in 1 case; partial rupture of perineum in 2 cases, one of which was operated upon, but unsuccessfully.

In two cases the position was known to have changed, after labor commenced, from left occipito-acetabular to right occipito-acetabular, and the children were born from the latter position.

Forceps delivery in 3 cases; chloroform was administered in 19 cases. Number of cases of puerperal peritonitis 7, of which 5 recovered and 2 died. Number of cases of essential puerperal fever, or puerperal septicæmia, 4; all of which recovered. One case died soon after delivery, of phthisis pulmonalis. Three

children died because of premature birth; one died of icterus nascentium, and one died of trismus nascentium.

In the cases of puerperal peritonitis, the treatment adopted was the usual one—quinine and opium combined, with, of course, the application of fomentations to the abdomen. The cases of septicæmia were treated with quinine in large doses, and the administration of alcohol, according to the indications for the use of this drug.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Society of Physicians and Surgeons of Chicago.

The following paper on Ovarian Dermoid Tumors was read before the Society of Physicians and Surgeons of Chicago, January 23, 1876, by W. H. Byford, A. M., M. D., Professor of Obstetrics, etc., Chicago Medical College:

Mr. President and Gentlemen,—In presenting this paper to you, I do so with special reference to what I consider a very remarkable case, which recently came under my observation. I therefore begin it with a history of that case.

Mrs. M., twenty-five years of age, was married in January, 1873. She had been delicate from childhood, and since the establishment of menstruation—although this function has been regular as to time and quantity—she has always suffered from pain at the periods.

During the summer of 1872, she had more pain at these times than usual, and in the intervals complained of backache and bearing-down sensations, to such a degree as to make it difficult to walk or to be on her feet for any length of time. In October of the same year, she was so prostrated as to make it necessary to take her bed. In this condition, at the close of a menstrual flow, she was suddenly seized with greatly increased pain in the pelvis, heaviness, and difficult menstruation. This was followed for a number of days by moderate metrorrhagia.

The acuteness of the symptoms slowly subsided, but left her in a state of great prostration and suffering.

As soon as she was able to be placed in a palace car, she was brought to Chicago, accompanied by her physician, Dr. A. G. Jones, of Lexington, Ill. This was in May, 1873. She was then unable to walk more than a few steps at a time on account of debility and a severe bearing-down sensation.

Upon making a pelvic examination, I found a retro-uterine tumor filling up the cul-de-sac of Douglas. She complained of great tenderness when the uterus and surrounding parts were touched. The tumor was large enough to press the uterus up near the pubis, and fix it in that position. Any attempt to remove the uterus gave her great pain. The tumor could be indistinctly felt at the pelvic brim.

My diagnosis at the time was retro-uterine hæmatocele in a state of inflammation, and I expressed the opinion that it would probably suppurate. The pulse was accelerated, face flushed, tongue dry, and appetite poor.

I advised her to observe strict quiet in the recumbent posture, prescribed a supporting treatment and regimen, with occasional anodynes as the pain might render them necessary.

She went home, and returned to the city the following August, very much improved in general health. Although she was led to expect and watch for suppuration, she was not aware that there had been any purulent discharge. An examination at this time revealed the facts that the tumor was somewhat larger than when last seen, decidedly elastic, and more globular in form. As a diagnostic measure, with the assistance of Dr. Merriman, I introduced an exploring trocar and evacuated three or four ounces of clear, yellow serum. As the tumor collapsed and partially disappeared, I hoped this operation would prove curative in its results.

The patient left the city, but returned again in July, 1874, eleven months after the tapping. The tumor had commenced to fill again, but I thought it best to wait for further development, and sent her home.

I saw the patient again in April, 1875, and decided that the tumor was growing, as it could now be felt in both iliac and

the hypogastric regions. I advised her this time to return to the city in the autumn, that I might operate for the evacuation and obliteration of the tumor.

She came to the city the 15th of October, 1875, and I found the tumor had grown quite decidedly since last examination. I determined to evacuate the tumor, and establish permanent drainage, with the hope of obliterating its cavity. Accordingly, assisted again by my colleague, Dr. H. P. Merriman, I operated by passing a large, long-curved trocar into the tumor behind the uterus. Upon withdrawing the stylet, there flowed through the tube a thick, opaque, pearly-looking fluid, that reminded me of the tenacious albuminoid substance often seen to flow from multilocular ovarian cysts. From twelve to sixteen ounces were thus evacuated. The long canula was left *in situ*, and the patient placed in bed.

The tumor was very much diminished in size, but did not wholly disappear. The same kind of substance continued to flow for four or five days in small quantities. The cavity was washed out through the canula with a solution of chloride of sodium twice a day.

On the fifth day I removed the trocar, and placed in the perforation a large gum-elastic catheter, and the cleansing injections were continued through it. Internally quinine, iron, and the mineral acids were administered.

The tumor continued to diminish in size, but a constant discharge was kept up, although steadily decreasing in quantity. The discharge at first was a greasy serum, with a peculiar odor. This became purulent, but at no time was there fetor of a character to indicate chemical decomposition, and before the death of the patient the quantity was very small in amount.

I could not detect the tumor above the pelvis, and by bi-manual examination convinced myself that it was slowly disappearing.

The strength of the patient was well sustained up to the first of December, when she was attacked by slight chilliness, with a moderate acceleration of the pulse. At no time from the date of the operation had the pulse ranged higher than ninety beats to the minute. After the chills, it mounted to 105. Tonic

treatment, with nutritious diet, was kept up during the whole time.

The second day after the chills occurred, she was seized with diarrhœa. The stools were copious, frequent, watery, and very fetid. Unfortunately vomiting soon supervened, and she was unable to retain food or medicine in sufficient quantities to be of service to her. Great prostration and exhaustion rapidly succeeded, and in spite of every effort to sustain her, she died at midnight, December 25, 1875.

The post-mortem examination kindly made for me by Dr. W. H. Warn, revealed a small dermoid cyst that would have held six ounces of fluid—involving the left ovary—containing a roll of fine hair about the size of a pullet's egg. The hair was blond, although that of the patient was very black. It was matted together in a pretty compact mass, and formed of individual hairs from four to eight inches long.

This tuft of matted hair was saturated with the same tallow-like substance that had been drawn from the tumor when punctured, and with heat it could be melted and caused to run from it. The hair was lying loose in the cavity of the tumor, not the slightest attachment could be discovered anywhere. The lining membrane of the tumor presented a uniformly rugous dermoid appearance, and in places was in a state of suppurative inflammation.

At the time of the operation, about eight ounces of fluid were collected in a small earthenware bowl for examination. After standing a few moments, and becoming cool, it was found to be solid, and had assumed a buff color, having very much the appearance of mutton suet.

Upon closer examination, it was found to be oleaginous in all its properties. It melted on the fingers, and could not be washed off without soap. Heat melted it into an amber-colored oily fluid that was easily poured into a bottle, where it again solidified, and looked like a poor article of olive oil that had been submitted to a very low temperature. It burned through a wick like any other oil, and made a pleasant, bright yellow flame.

I sent a specimen of this substance to Dr. W. L. Atlee, of

Philadelphia, who was kind enough to submit it to Dr. Drysdale for examination. Dr. D. says:

"The specimen was of a pale yellow color and odorless. It became liquid at a temperature of 84° F., and remained so at 82°, but commenced to solidify at 80°. Ether dissolved it readily and entirely, except some small flakes of a whitish color. It did not crystallize on cooling or evaporation of the ether.

"*Microscopic Appearances.*—The only distinct cell present was the scaly epithelial. It contains a large number of cells of this character, and remains of these cells partially disintegrated. A few cells of large size were also seen, and a great number of small, obscurely granulated cells, resembling the remains of pus cells. Except these cells, all were indistinct."

Dermoid cysts are not peculiar to the ovaries. They occur in various parts of the body, but in the ovaries they grow much larger than elsewhere, and the characteristic contents exist in greater quantities.

The cystic walls of the ovarian dermoid tumor are thicker and more dense than in the other varieties of ovarian cysts, and the lining membrane in some of its extent has a modified cutaneous structure—whence the name dermoid.

In tumors of this kind are found sebaceous or fatty matter, hair, bone, teeth, and, though rarely, muscular and nervous tissues. But these different substances are not often all found in every single specimen of this variety of tumor. Generally some one or two of them prevail to the exclusion of the others, as, for instance, bones, teeth, and short hair, while in others the sebaceous material and long hair are associated without the bone.

In April last, I removed a tumor from a young Jewess which contained about twenty pounds of thin serum, bone, teeth, and short hair. The bone constituted a reticulated mass, two inches thick, and about eight inches in diameter, attached to the inside of the cyst. It somewhat resembled honeycomb in its arrangement, with interstitial cavities irregularly permeating it in every direction. To the surface of this bony accumulation were everywhere attached a multitude of rudimentary teeth,

in appearance and structure precisely resembling the crown and body of the first incisors of a very young child. The enamel was complete, and the dentine beneath quite perfect in structure. They were attached by a fibro-cellular substance, and could be easily separated by the fingers. I did not count them, but I am sure there were several scores. Among these dentoid bodies was quite a thick growth of short, very fine blond hair, from half an inch to two inches in length. The bone and teeth presented all the microscopic characters of these substances found in their normal relations.

Another ovarian dermoid tumor, removed from a young, healthy girl, at the Mercy Hospital, contained no bone, fat, or teeth, but on one side the wall of the cyst was half an inch thick over a space as large as the palm of the hand. On the surface of this thickened portion there grew a tuft of very fine blond hair. Some of the hair was three inches long, but most of it from half an inch to an inch in length. The thickness of this part of the sac was caused by a mass of cartilage arranged in the same reticulated manner as the bone found in the case of the Jewess. There were from fifteen to twenty pounds of serum in this tumor, in which was discovered the granular cell of ovarian fluid.

The cyst, to which your attention is called to-night, yielded, at the first tapping in August, 1874, nothing but two or three ounces of serum, while on the 15th of October, 1875, there was evacuated nothing but a large quantity of sebaceous matter, of which this now submitted for your inspection is a sample.

At the autopsy we found the sac empty of everything but the bunch of hair here exhibited. There is no trace of bone, teeth, muscular, or nerve tissue.

After making such research as my sources of information afford, I can find no instance of this kind of tumor in which this fatty matter preponderated. Usually it constitutes but a small part of the contents, the main bulk being serum.

In these specimens, we have something of the manner in which the different substances contained in dermoid tumors are distributed and associated.

The accepted theory of the formation of these tumors may

be thus expressed: During early embryonic development a portion of the external layer of the blastodermic membrane, by some accident to the ovum, becomes depressed from the general level of the surface. The surrounding edges of the depression approximate over the depressed surface, come in contact, grow together, and thus encloses a dermoid cavity, in which the abnormal dermic products are generated. As the ovum grows, the adventitious cavity increases in size, and participating in the general generic influence exerting itself in the whole embryo, its inner surface produces the rudimentary organs and secretions found in it.

When it is remembered that the external layer of the blastodermic membrane is the matrix in which are generated the skin and its appendages, and how extensively it engages in the formation of all the tissues and organs outside of the abdomen, this theory will appear quite plausible.

The locality of the accidental blastodermic indentation must determine whether the dermoid inclusion will be in the dura mater, scrotum, testicle, back of the neck or ovary.

According to this theory, as well as established facts, this form of tumor is congenital.

In most localities it fails to attain great dimensions. When it is situated in the ovary, however, its growth is influenced by the great change which comes over that body at puberty, and that continues during the sexual activity of woman. As a consequence of the superior vitality of the ovary during that time, they are excited into rapid growth.—*Chicago Med. Jour. and Examiner.*

Trigg County (Ky.) Medical Society.

The following address was delivered before the Trigg County Medical Society May 8, 1876, by J. W. Singleton, M. D., Paducah, Ky., and published by request:

Mr. President and Gentlemen,—I have long entertained the opinion that very much of the popular deception and imposition commonly associated with the "practice" of medicine, has resulted from public ignorance on one side and professional exclu-

siveness on the other; and that in proportion as enlightened and liberal-minded men correct popular errors and instruct the general intelligence on important medical questions, we shall hasten the advent of the time when men and women will be able to discriminate between rational science and base quackery; between the genuine remedial coin and the counterfeit, in all things that relate to the relief and prevention of disease, and to the promotion of the general welfare. We, therefore, believe that the votaries of medical art have a mission to perform in this world higher than the simple act of administering remedies for the cure of the ills incident to human flesh and blood, and that the great public should be duly and truly prepared to understand what that mission is, and be ready to appreciate it at all times and under all circumstances.

While it is highly improbable, or at least hardly to be expected, that non-professional minds should properly comprehend the profound mysteries of medical science and "the gift of healing," nevertheless, a decent respect for the opinions of society demands that, to a reasonable extent, we should be cheerfully willing to teach our fellow-citizens how to take care of themselves and their dependents, and thus demonstrate the universal principles of philanthropy and benevolence which should ever distinguish our profession. We should teach mankind who are the devoted servants of truth and honesty, in remedial affairs. We should warn them against impostors and poisons. We must hold up to them the mirrors of Nature, of Science, and of Art, that they may not reject the virtuous teachings of the crowned heads of medicine deduced from the practical application of discoveries which are designed, in the Providence of God, to confer inestimable blessings upon the sons of men.

The mission of medical science is to succor, relieve and save our fellow-creatures. The mission of medical science is one of joy and comfort to the human race. The mission of medical science is that of fraternal relief, brotherly sympathy, and world-wide charity. Laying its sure foundations broad and deep in the divine philosophy of relief for sinful and fallen man, its precious gifts have been consecrated in the smiles and tears

of centuries. Medicine comes to us on the first centennial of our country's birth, fresh and full, blooming and joyous, clothed with the glories of the past, adorned with the triumphs of to-day, hale and vigorous, and habilitated for new and more glorious victories in the great battle against disease and death.

If medical science has a mission to perform, and that mission is but half performed, it must have its devoted ministers to complete the grand and holy work. It must have its single-hearted and self-sacrificing servants, who, fully imbued with its beneficent intentions, will consecrate their best powers of mind and body to accomplish for it that magnificent destiny which it is steadily approaching. All over the world the heads and hearts of the Profession are meeting and conspiring together to this grand purpose. From the banks of the Danube and the Rhine, from classic Scotland, from the land of Emmet and O'Connell, from our ancient mother country, and from beautiful France, the message comes that our brethren of medicine have united in one firm and earnest medical brotherhood, and are moving in solid column for the elevation of medical science and character as a priceless blessing to mankind. It may be that not one-half of their sanguine hopes and fond expectations will be realized in the relief of the pains and sufferings of their fellow-men. It may be that the united intelligence of the whole medical world will not succeed in arresting half of the contagious and infectious diseases which now afflict the human family. It may be that their precious counsels will be disregarded by peoples, states and nations, and the excellent fruits of their labors be left to rot in the midst of the ignorance of the poor, and the selfish indifference of the rich for a time. Be it so. But the day will come when the sage advices and solemn warnings of men of science and lovers of mankind shall be heeded, and society will be moved and controlled in all matters concerning the prevention of disease, upon soundly deduced medical opinion, in the preservation of the public health and in the increased average duration of human life.

One of the chief missions of medical science is the essential institution and observance of correct principles of universal hygiene; the great secret of future protection from devastating

pestilence and of the promised health and vigor of the earth's busy millions.

With all of our boasted success in the cure of disease, we are yet in the infancy of sanitary art. Perhaps there will yet be discovered an antidote for every poison and pain which now produce sickness and death. It may be that the seeds of disease shall yet, by the conservative influence of preventive means promptly applied, be blasted and utterly destroyed before the direful work of vital suffering and destruction is fairly commenced. Who knows, and who can foretell the degree of preventive and remedial perfection to which our art may attain? It may happen in the course of discovery that the seeds of such merciless diseases as cancer and consumption may be completely destroyed and be made to lose their destructive power. These and other blessings must be accomplished in the annals of medicine for the good of our fellow-man, before the followers of medicine can rest from their labors.

In the great work of universal sanitation and in the physical and moral reformation of mankind, we must commence within the sacred precincts of that hallowed ground upon which a man "leaves father and mother and cleaves unto his wife, and they twain become one flesh." Through wise counsels to wise legislators in the medical, moral and legal protection of the institution of marriage, a new race shall people this earth, perfect in physical, mental and moral structure, and as pure in blood as when man sprang to being on the sixth day of the creation, when God Almighty breathed into the nostrils of his master-piece and "man became a living soul." In the purification of the human race it may become necessary to separate the clean from "the unclean" with the strong arm of the law, on principles of science and humanity. The increasing deterioration of the human species may imperatively demand the segregation of "the leprous" from those whose blood has not presented any evidences of infectious contamination. The greatest good to the greatest number may require that seemingly harsh measures shall be applied to the unhappy and unfortunate few. But it is better for the health, comfort and happiness of men that thousands be sacrificed to the penalty of separation from the

sound and healthy, rather than the blood of whole generations should be filled with rankling poison and death-dealing hereditary infection. And it may come to pass that even in this Christian age, an age remarkable for its splendid charities and generous benefactions, men of science

> "Must be cruel only to be kind,
> Or bad begins and worse remains behind."

The policy of separating, as far as practicable, the pure from the impure, "the leprous" from the sound, the consumptive from the healthy, the cancerous from the non-cancerous, the drunken from the sober, those who lead regular and exemplary lives, according to the laws of nature and of God, from all who walk and live unseemly, may at first glance prove a task strange, cruel and difficult; but when we reflect that a "little leaven leaveneth the whole lump," and that streams of poison flow from father to daughter, from mother to son, and alas! too often in scenes of connubial association from husband to wife, and from wife to husband, entailing incurable maladies upon the innocent, it is time that the friends of humanity should warn mankind that the sins of the fathers are being visited upon hecatombs of men and women, whose life-spring, poisoned at its source, flows forever onward in hopeless misery and tears!

One of the most melancholy instances of the necessity of the separation and seclusion of thousands of our fellow-beings, who have become polluted with a loathsome and incurable disease from the ranks of the sound and healthy, is to be found in the island of Molokai. There is a smiling group of lovely islands in the South Pacific Ocean, where the sun ever beams brightly, and whose gentle sea breezes are ladened with the fragrant perfume of perennial flowers and luscious fruits. The nutritious bread-fruit, the cocoa, the date, the banana, and the pine-apple, furnish luxurious sustenance for the inhabitants of that bright spot, to live without labor as they drink the coolest and purest water that gushes from the mountain side to refresh, invigorate and beautify the plain below. That land far away, as an oasis in the desert of a trackless sea, seems to be an earthly Paradise. But in its sad history we find that appearances are

deceitful, and we sadly realize that it is a country in which "every prospect pleases, and only man is vile." The beauty and glory of that diamond-lit and blossom-clad gem in the midst of the great water is blighted by a curse; a curse not from Heaven—no, God forbid—but of man's own begetting. Buried in filth and disease; living in indolence and immorality; disregarding the warning counsels of the pious missionaries, who half a century ago tried to teach the besotted encumberers of that smiling land how to live, and by holy example lead the way to morality and religion and to life eternal; these poor, benighted creatures set at naught the advice of their best friends, and to-day a large island of the Sandwich group, bound by high and rocky cliffs, and excluded from its sisters, is densely populated by condemned lepers, who are left with the leprous only as companions to suffer, to rot and die unfriended and without human sympathy. The unfortunate objects of Nature's wrath, as the consequence of man's wrong-doing, had the foundation of their ruin laid in the sins, excesses and crimes of their fathers, who lived in violation of the moral law, and left their miserable descendants to reap the whirlwind of physical, mental and moral disaster, which has already followed, and which will continue to the remotest generations of their posterity; until deprived of the privilege of propagating their kind, the remaining loathsome examples of ignorance and folly shall utterly perish in their own corruption, and even their remembrance shall fade forever from the haunts of men.

One of the highest and holiest duties of the scientific physician is to be instrumental in devising means to protect civilized society against its own excesses, that we may not have to repeat the sad history of Molokai as the consequence of our own vice and shame.

Under the enlightened direction of scientists and humanitarians, courts and legislatures have been prompted to the adoption of measures calculated to save mankind from themselves. Marriages of kindred have been forbidden by the statutes of a hundred states and kingdoms. Diseased poverty has become the public charge. Criminal infection is meeting its just punishment at the command of a healthy public opinion.

The progeny of the polluted and corrupt are meeting an early death. The race of moral and physical lepers is being exorcised from the ranks of the pure and the good. The world's great heart is moved to the grand and glorious work of human redemption. The tendency to physical and mental improvement is marked everywhere. Hygienic laws enacted by wise governments are sustained and enforced by the devotees of science. Yet we have but commenced the great and beneficent work soon to be nobly finished for man's deliverance. In its final consummation it may become necessary to apply the actual cautery, even to the domestic circle, for the salvation of the human race. If in the providence of God such a time should arrive, let the task be performed with mercy to the present, but with justice to the future inhabitants of this beautiful world. Let us fully realize the fact, that it is far better for mankind that thousands should suffer the ills and deprivations of separation from the healthy and the vigorous, than that millions should be blasted with the curse of poisonous infection or hereditary disease. He is noblest on the roll of honor who does the most to bless his fellow-creatures; he is worst who would knowingly and willingly be the instrument of transmitting a loathsome affection to the helpless innocents who may come after him to take his name and perpetuate his shame. There should be no pity for that man who, knowing that his blood is poisoned and his embrace a blight and a curse, will yet contend for the privilege of gratifying his desires at the cost of the suffering and misery of unborn generations. Society and the legislative authorities of the world should adopt measures to protect our posterity against these monsters in human shape, or mankind will yet become a reeking mass of hereditary disease and corruption, disgusting alike to the gods and to men!

Two of the most fruitful sources of disease and death are malarial exhalations and the poisonous effluvia of animal decay. The attention of men of science has long been directed to the importance of neutralizing these noxious elements, or of removing them, so that they can not exert their destructive power. For thousands of years his Majesty King Malaria has held sovereign sway over the fairest of countries. Where the roses peren-

nial bloom; where the cypress and the pine mingle their tender foliage in fond dalliance beneath the warm rays of the tropical sun, and the spicy gales are wafted in loving melody through orange groves and bright magnolias, our insidious enemy, malaria, is ever ready to perform its deadly work. The most beautiful and the most fertile regions of the earth are cursed with this protean poison of suffering and destruction; but by a wonderful provision of Nature the bane and the antidote grow together upon the same sunny hillside, and imbibe their nourishment from the maternal bosom of the same genial soil. "The author of every good and perfect gift" rears the lofty trunk and branches of the Peruvian tree, from whose wonderful virtues the great world's blessing, quinine, receives its origin and exercises its power.

And, to-day, the conflict rages between the two mighty powers of disease and of remedy, wherever malaria is felt, and where the names of Powers and Weightman are familiar to medical men. To remove this potent cause of more than half of the diseases, incident at least to the western hemisphere, is the task of medical science in the future. If we know whence a poisonous principle emanates, and what are the circumstances necessary to the production of that disease-producing agent, why can we not, in some way or other, eventually discover and destroy that poison at its source, and thus protect peoples, states, and nations from its dread consequences? The votaries of medicine should never rest satisfied until the poisonous breath of the swamps and morasses can be rendered pure and healthful by human effort, and not until the merciless monster, malaria, is shorn of its consuming strength and made to bow in suppliant obedience to the commands of scientific men.

As fire is the greatest of all purifiers, may not the time soon come when mankind shall properly use this Promethean element for the purification of the air that we breathe from all pestiferous ingredients, and thus support, strengthen, and prolong man's life? Is it not highly probable that vast regions of country, now almost uninhabitable, can, and will, be made smiling centres of vegetable life, healthful beauty and robust longevity, by the proper and seasonable use of the torch and the

furnace? Is it not possible that in process of time, very much, if not all, of the poisonous exhalations from the earth's surface and from dens of filth and putrefying animal and vegetable matter, may at once be burned up, and the rich solids and gases of which they are composed be at once permitted to return to their original elements without endangering the health, comfort, and safety of the living? Why should there not be a purifying furnace in every household, in every public place of resort, in every crowded factory, work-shop, school-house, etc., where all noxious excretions and offensive matter could be immediately decomposed, and their fertilizing elements sent onward in Nature's germinating, budding, blooming, and fruitful round of reproduction? We can not destroy anything; but many things can destroy us. In simple elements we find the most safety to these mortal bodies. It is in the intentional or accidental combination of simple elements that compounds are made destructive to health and life. To control the dangerous effects of matter in any condition is one of the chief duties of the man of science; and when he accomplishes this purpose, he becomes a public benefactor.

There is scarcely known a poison more surely destructive to human life than the fermenting juices of the dead body of man, even under circumstances of death from an ordinary disease. But when we add to this the death-dealing germ of a terrible epidemic that lurks unseen in the clotted blood and decaying flesh of a fellow-being who has died of a wasting pestilence, how necessary it becomes when our loved ones are snatched away from us by the cruel monster, that their remains should be hidden away in deeply-dug graves or speedily made harmless ashes of our tender and affectionate memory. We have no moral right to peril the living with the putrefying bodies of our kindred and our friends. As shocking as it may seem at first thought to our sensibilities, would it not be better for us and the world of mankind that the fertilizing ingredients of which man is composed, should, after death, be immediately set free through the agency of fire; and, having formed the strength and beauty of our humble or glorious life, enter the form of another maturing human existence? Let the carbon

enter and build up the patriarchal oaks that shelter ancestral homes. Let the oxygen light up the cheerful hearthstone with its comforting flame, or mingling again with its loved associate—hydrogen—go to fill stream and streamlet, or refresh the earth with moisture, cause verdure to spring forth or tremble in the morning dew amid the fragrant petals of the rose. Let the phosphorescent fires that gave electrical vigor and animation to one man be freed in the separation, and be permitted to enter and quicken the cerebrum of another candidate for immortality. And thus we help to perfect the circle of Nature by speedy decomposition of the dead for the safety and regeneration of the living.

After all of the popular prejudice against cremation, it is not so horrible, when properly considered, as some sentimentalists regard it. It is one of the great questions of the future. Whatever may be the opinions and the *feelings* of the good and the tender-hearted on the subject now, men of science, even on this big continent, must teach the people its ultimate importance to the protection and well-being of the human family.

The efforts of scientific men to influence the enactment of sanitary laws throughout Christendom have accomplished comparative success, but a success not at all commensurate with the importance of the subjects therein embraced. The injunction of our Divine Master to "take no thought for your lives what ye shall eat and what ye shall drink," was a command to the inspired Apostles, and not to the victims of modern adulteration. When we know that the solids and fluids which we use to nourish, build up, stimulate, and sustain us during our brief life career on earth are frequently poisoned with material destructive to health and life; when we are assured that very often, through the selfish and brutish cupidity of drug-sellers and nostrum-venders, that which is used as a "remedy" for the relief of disease is a thousand times more dangerous than the disease itself, it is time that the laws of all lands, supported by a healthy and vigorous public opinion, should sustain the followers of medicine and the lovers of humanity in a combined and determined effort to rid society of the dread incubus of adulteration; adulteration of the food which we eat and the

medicine which we swallow to save us from starvation and death; adulteration, whose fell spirit with money for its god, human misery for its work, and hell for its final reward, cares not for the ruin and sorrow that follow in its train!

Humanitarians throughout the two continents have their minds thoroughly awakened on the great questions of sanitary, dietetic, and remedial purification. The day is not far distant when Boards of public health shall, everywhere, be in active and earnest work to inspect our homes and closets; to examine the food and drink which we consume; to warn us of the dangers of impostors and poisons; and to warn us also of the lethean elements of destruction that lurk in the smothered fires of the devil-broths that prey upon the vitals of our fellow-men. These servants of mankind will enter the sanctum sanctorum of quack doctors and apothecaries; they will even invade the splendid establishments of manufacturing chemists. They will sit in judgment over the market-places, and inspect the staffs of life as they come smoking from the oven or bleeding from the slaughter-pen, approving or condemning, as each may deserve. Medical intelligence will demonstrate to the great public the way to find pure bread, pure meat, pure drinks, and pure medicines. And the final and successful work of the enlightened sanitarian will show our fellow-creatures how to prevent disease by preserving the integrity and healthful vigor of Nature's laws in obedience to the commands of God.

Finally, the grandest mission of scientific men in this world is the glorious task of harmonizing the discoveries and the principles of science with the teachings of Divine Revelation. To accomplish this great object, and to satisfy the minds of the *honest* of all climes and countries in their anxious cravings for the truth, we should be willing to meet in the investigation of *what is truth*, without sectarian prejudice, pre-conceived notions, or religious bigotry. The assertion that the majority of scientific men are atheists is an unfounded and slanderous allegation. Men who perform the work of gods as ministers of mercy should not be classed with devils! While we contemplate with astonishment the startling results of chemical combinations; while we revel in the increasing wonders of the

microscopic world; while we investigate anatomically and physiologically the organization and functions of animal and vegetable life, and strive to understand that mysterious vital principle that rules and reigns in them all, we must take it for granted that a GOD-POWER created and sustains them all, in whose gentle love and mercy for the children of men, He has wisely ordained that matter and mind should show forth His glory, and in all things commanding the adoration and praise of His dependent creatures!

I would that my medical brethren and men of science everywhere could be "persuaded" to be Christians, in deed and in truth; for there is nothing in the letter, spirit, and practice of Christianity whose observance would not adorn the medical character and give grace and beauty to the wisest of mankind. And what matter is it to the Christian scientist whether this terrestrial globe is four thousand or four millions of years old? What does it concern the present welfare and future happiness of men whether or not a thousand pre-historic races have come and gone before the creation of the world's present inhabitants? Nor is it necessary to refer to the popularly-received contradictions between science of geology and the Holy Scriptures, nor to any senseless "ism" that may disturb or distract our child-like faith in the divine authenticity of the Bible. Suffice it for us that the claims of universal intelligence demand our best efforts for the elevation, purification, and regeneration of society, and the undiscovered treasures and blessings of the future await the magic touch of science and art. And from that sublime harmony which exists between the good of all systems, all of the facts necessary for our material and social advancement shall yet be developed, "according to the eternal fitness of things," and we shall be enabled to realize that Christianity and science are the Alpha and Omega of God's glory and man's happiness, both here and hereafter.

Brethren of the Profession, with one mind, one heart, and one faith in the virtue and honor of our noble cause, let us renew our firm resolves to consecrate our best efforts and energies to the humane and benevolent mission of scientific medicine. Let us cast aside all selfishness and exclusiveness; all

rankling and bitterness that may hinder us in our task of human benefaction. While human misery has a tear to wipe away, let us "be up and doing"; while bloody wounds maim "the temple of the living God," let us "be up and doing"; while pestilence stalks abroad in the world, let us "be up and doing." Let us, with our hearts in our hands, advance the standard of progress, and with strong arms and ready minds keep firm hold of all of the weapons of truth to fight for the redemption of mankind from the sad consequences of their own misdoing and criminal folly and from the blight of disease, to the honor of medical science and its devoted servants.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

MOBILE, June 27, 1876.

E. S. Gaillard, M. D.:

Dear Doctor,—I see in the "American Medical Weekly" of date 24th instant, a letter from Dr. Brickell, of New Orleans, on the subject of a Medical Journal Swindle, which had been perpetrated upon the physicians of that city, by one M. C. Lockwood, Special and Sole Agent of W. A. Townsend, Publisher, etc., of New York.

It appears from this communication that this same Lockwood has played the same rôle in that city which he subsequently did in this—to-wit: In the last days of December, Lockwood came to Mobile and presented himself to the physicians of our city, showing letters and credentials from the well-known publishing house of W. A. Townsend, of New York; these letters endorsed Mr. M. C. Lockwood as "special and sole agent of the house of W. A. Townsend." During Mr. Lockwood's stay in Mobile, he was frequently at my office, and on more than one occasion showed me letters which were post-marked New York, and signed W. A. Townsend. These letters, from their tenor, seemed to be written in reply to letters *from* Mr. Lockwood,

and pertained to his duties as agent. In a word, everything about this Lockwood went to justify the confidence we placed in him. He was soliciting subscriptions for "Braithwaite's Retrospect," and also other journals. He distributed the catalogue of W. A. Townsend, the publisher of the American edition of Braithwaite, which catalogue has printed in it an entire list of all journals published in America, and some of those of England and France. Mr. Townsend publishes a list of such as he will furnish; it was plausible that if Mr. Lockwood was Townsend's agent for Braithwaite, that he was also his agent for other jonrnals which he (Townsend) included in his catalogue.

However, Lockwood got upon his list the names of nearly every physician in the city of Mobile, and their subscription money in his pocket—some for one journal, others for two, three, or four publications—whilst some fifteen of us, more credulous than the rest, formed a journal club, subscribed to all the leading American, English, and French journals *on the list of Townsend's catalogue*, paid in our cash, and awaited the reception of the journals, which Lockwood said would begin to reach us as soon as he could communicate with Townsend.

Having done up the doctors of Mobile, Lockwood left for either Selma or Montgomery, and we have not heard of him since. Before leaving, he made an arrangement with me, in writing to W. A. Townsend, that he would furnish any additional journals which we might desire to add to our club subscription at 15 per cent. discount from usual price.

Hearing nothing from our journals during January and February, I wrote to Mr. Townsend early in March, and asked him why the delay with the journals subscribed to in Mobile. Receiving no reply, I wrote again and again—some four or five letters. Still no answer. I then learned that other physicians had been writing to him, with the same results. I then wrote early in April to Townsend, and told him that unless he sent our journals or refunded our money, I would publish him and his agent in every medical journal in the country, North and South.

In less than ten days I received a reply from Townsend, in-

forming me that he had been very ill; that he had received an injury, which had laid him up, some miles from New York, and hence he had not written.

This looks strange for a well-known publishing house not to reply to letters such as were written to them, simply because the head of the house was sick in the country! But when he did write, he said that Lockwook was his agent for Braithwaite only, and for Braithwaite only would he become responsible

Now, the subscription price of Braithwaite is only $2.50 per year; that of other journals, which he offers in his catalogue to furnish, cost a little more; in fact his agent got subscribers for Braithwaite as well as the other journals whilst he was doing up the doctors in Mobile. Then Townsend wrote to me that he had not heard from Mr. Lockwood since September, and that he had no idea where he was; but so soon as he could find him, he would make him return our money, etc.

If Mr. Townsend has not heard from Lockwood since September, what became of the letters which Mr. Lockwood wrote to him from Mobile? On more than one occasion I saw Lockwood post letters addressed to W. A. Townsend, New York, in a letter-box on a lamp-post almost opposite my office door. Lockwood was frequently at my office, and sometimes wrote letters there. Perhaps those letters reached New York when Townsend was laid up out of the city. This may all be true. It is possible that Lockwood duped the doctors and deceived his employer, Mr. Townsend. Then how can Mr. Townsend explain why it was that after he was apprised of the fact that his agent had taken our money for the journal for which he acknowledges himself responsible and bound to furnish—viz., Braithwaite—how is it that we never received that journal until late in May? It was published in January. The truth of the matter is simply this, Townsend began to receive letters from more quarters than one threatening to publish him, and then it was he sent out the January issue of his Braithwaite. He had acknowledged himself responsible for Braithwaite, but for none other; then why did he not send along his Braithwaite? Why did he wait until I wrote him I should publish him?

There is another strange feature in the transaction. Lock-

wood comes here as the agent of Townsend; he circulates Townsend's "Special Announcement to the Profession," which special announcement says Mr. Townsend has made arrangements for supplying medical and scientific books and periodicals to individuals, libraries, and associations. He sends this man Lockwood out as his special agent, and he brings along packages of this *special announcement*, which he distributes to the physicians, thus gaining their confidence; and after Lockwood has swindled the Profession all over the South, Townsend now says Lockwood was his agent for Braithwaite only. "Braithwaite, the cream of the world's medical literature," as Townsend styles it.

As the matter now stands—we may be mistaken, but the impression has certainly been made upon the minds of the physicians of this section—Townsend is responsible for Lockwood's acts, and failing to become so, he places himself in the same position with Lockwood. It is too small a transaction for us to test the matter in a court of equity, and we now make this communication simply to guard the Profession against the persuasive eloquence of this Baptist Divine, M. C. Lockwood, Sole and Special Agent for W. A. Townsend, Publisher, etc., New York.

Lockwood went eastward from here, and it may prove interesting if other medical gentlemen through the South will give their experience with this *chevalier d' industrie* in his peregrinations through the conquered provinces, seeking new subscribers for this skimmer of "the cream of the world's medical literature."

Very respectfully,

C. H. Mastin, M. D.

Berlin, Germany, 1876.

Messrs. Editors,—The fifth Congress of the German Society of Surgery was in session in Berlin from April 19th to the 22d inclusive. Though the proceedings are now five weeks old, they are not yet fully published in the German journals; my own delay in sending these meagre notes is perhaps an illustration of the reportorial life of German journals in general.

The session was opened by an address of welcome from the president, whose name is thus registered upon the published roll of members: Geheim-Ober-Medicinal-Rath und Professor in Berlin; Dr. von Langenbeck. The following is the list of papers of the first day, with their authors:

The Antiseptic Treatment of wounds in Military Surgery, by Professor Esmarch, of Kiel; On the Lister System of the Treatment of Wounds in the Clinic at Freiburg, by Professor Berus, of Freiburg; On a New Apparatus for the Antiseptic Closure of Wounds, by Professor Trendelenburg, of Rostock; On a Modification of Lister's Bandage, by Dr. Burchardt, of Berlin; On the Cotton-wadding and Tannin Bandage, by Dr. Graf, of Eberfeld; On the Open Treatment of Wounds, by Dr. Burow, docent at Königsberg; On Hæmorrhage Succeeding the Use of the Artificial Blood-vacuüm, also by Esmarch; On Catgut Suture in Wounds of the Uterus after the Cæsarean Operation, by Dr. Martin, of Berlin; Classification of the Causes of Death in Surgical Cases, by Professor Heineke, of Erlangen. It will be observed what the tendency of the surgical mind of Germany is to-day by the bare enumeration of the titles of these papers, Lister and the antiseptic plan forming three-fourths of the material of the first day alone.

I will allude only to Professor Esmarch and his first paper. It is very erroneously supposed in some quarters in Germany that he is the inventor of what is correctly known as the "Lister antiseptic treatment" of surgical wounds. Without doubt Esmarch has modified the original details of Joseph Lister, of Edinburgh; that, however, does not relieve one's astonishment at the error, for in point of chronology Professor Bardeleben, of Berlin, in the surgical clinic of the Charité, in that part of the buildings known as the "Sommerlazarat," first introduced it into Germany in March, 1872; since this time it has been successfully prosecuted in his wards, and is one of the most familiar practices under Bardeleben. I may add that in this clinic is the system so simplified that its cost is one-tenth of the original Lister antiseptic system. Its use in Langenbeck's clinic was later adopted. A brief detail of the apparatus constituting this system, as used here, will not be out of place. As

one enters Langenbeck's theatre in Ziegelstrasse, he sees a number of quart bottles with a rubber spray attachment, and filled with a solution of carbolic acid of the strength of one per cent. Two assistants work these bulbs, one on either side of the part operated on, during the whole time of the operation; that is, more accurately, from the moment of the knife-touch until the surgical wound is firmly sealed with the various dressings. The operating instruments lie in a quadrangular cut-glass dish in a similar solution, being entirely protected from the air. The sponges upon the rods, as well as the rods themselves, have previously lain in a similar solution, which occasionally receives the addition of one per cent. of salicine. The sutures are catgut of different sizes, and lie in small vials of carbolized oil; those for use about the face are the smallest, and are numbered 0. I may add here that Schweigger uses catgut for all operations upon the lids, conjunctiva, and muscles of the eye. After an operation Langenbeck spends considerable time in spraying the parts with carbolic acid and salicine, also with ice-water, if the exposure to ice-water is admissible. After the sutures, layer after layer of antiseptic cotton is used; or, if there is danger or inconvenience from hæmorrhage, alternate layers of styptic antiseptic cotton. Cotton, with a tannin or a chloride of iron solution, alternating with the white carbolic acid cotton, is, to the American eye in this centennial year, very pretty to see in a Berlin clinic. It suggests the American flag. A very light carbolized gauze bandage envelopes the whole firmly, if the part is an extremity; or, if a bandage is impracticable, the dressings are covered with colored oil silk, and fastened down by collodion. If the wound is to suppurate, as after the amputation of a tumor or an extremity, a drainage-tube of caoutchouc, long enough to reach the farthest point in the wound, with a calibre of at least one to one and a half centimetres, and supplied on all sides with enough holes to make the drainage perfect, but at the same time with not so many as would weaken the rubber and bend it on itself in the wound, is used, over which the edges are firmly drawn together. These tubes are also kept in a weak carbolic solution. The same devotion to antiseptic agents, chief of which is carbolic acid, is

maintained in the clinical wards of Langenbeck and Bardeleben; that is, one nurse sprays with the solution while another changes the dressings. In this connection I may add a statement of Langenbeck, made in December, 1875, to the effect that since the war between Prussia and Silesia, known as the war of 1866, but one case of diphtheritic gangrene had occurred in his clinic. That was a case, then before him, of removal of an angioma cavernosum from the outer end of the left clavicle. He cauterized the whole gangrenous surface with three actual cauteries, bringing to view the outer half of the clavicle, the spine of the scapula, and the apex of the shoulder-joint. In the treatment of wounds on this plan the rule is, if there is no surgical fever or œdema, they are left to themselves for several days. Some one once remarked to Mr. Lister upon the filthy appearance of his wounds, that had not been dressed for a week. Said he, "Regarded æsthetically they are, indeed, nasty; but I assure you they are absolutely clean." Langenbeck's clinical room is charged with the mixture of carbolic-acid gas and animal exhalations to such an extent that it easily falls into the same category of ventilation as the ordinary German restaurant with its tight windows and foul smoke. Such is the Lister antiseptic plan as used in Berlin; the same general apparatus is used all over Germany. Its general reception is explainable as well on the ground of its light weight as on that of its healthy properties; and this in view of the cumbrous surgical appliances which one sees in the German shop-windows.

The other papers on surgical dressings for the first day of the session were, as may be seen by their titles, suggestions as to modifications of the bandage, its medication, etc.

A word about Esmarch. His *personnel* is striking. He has a tall, erect figure, long head, wears a full and very gray beard, dresses in black after the English fashion, and carries a face which indicates control of the habits and a youthful temperament. He speaks but little in the sessions, and is then listened to attentively. He is in marked contrast to Volkmann, of Halle, a man of apparently equal regard as an authority, but whose many short speeches and annoying objections detract from the mature regard to which his achievements justly entitle him.

The papers of the second day were devoted chiefly to the bones,—to the pathology of their diseases, and their operative interferences. Professor Berus, Freiburg, demonstrated the use of the plaster mould in luxations and resections of the ankle-joint. His plan in the latter cases is to apply the cast of gypsum immediately after and over the antiseptic dressings, and not to remove it until the wound is ready for its final removal. By the drainage-windows every facility for discharge is furnished, and he claims to have seen no surgical fever. Volkmann has had experience with caries of the ankle, fistulæ and fungous growths being usually associated. Langenbeck was favorably inclined to the gypsum dressing, especially in the ankle-resections of children.

Dr. Weber-Liel, privat docent of Berlin, demonstrated the use of the microscope in diagnosticating affections of the membrana tympani. He has for some time used in his clinic a short, light, "children's microscope," of fifteen-diameter magnifying power, whose object-glass, wrapped around with caoutchouc, is inserted like an ordinary speculum into the meatus of the ear. It rests with safety, and is held by the same hand whose fingers make traction on the auricle. Light is reflected from a convex mirror, at forty-five degrees, which is adjusted in a stationary position in the cylinder of the microscope and in focal distance from its object-glass. Its use was demonstrated upon a prepared temporal bone and membrana tympani, artificial light being thrown upon the stationary mirror lying in the cylinder of the microscope, and being screened from the eye of the observer. A rubber tube is firmly waxed to the annulus on the side of the tympanic cavity, by which the observer may draw in by suction, or push out by blowing, the membrane, at the same time that both hands are free to manipulate the instrument. I have repeatedly observed the excursions of the membrane in his clinic, where the movement was made either by inflating the Eustachian tube or by a large rubber tube attached to the cylinder of the microscope. The points clearly brought to view in the living, healthy membrane by this power are the arteries on either side of the handle of the hammer, small and otherwise undiscoverable cicatrices, the

result of healed perforations, and the very unequal movements of the different quadrants of the membrane. As a means of diagnosis it must surpass Sieglé's otoscope. Its introduction before the Surgical Society was inopportune, and the interest taken in it was as a matter of curiosity rather than as an adjuvant in surgical diagnosis.

Professor Maas, of Breslau, read a paper upon the regeneration of bone, with especial reference to the formation of callus, in which he took strong ground in favor of the periosteum as the principal agent in regeneration, in time and amount; that is, the periosteal callus proceeds early and in large quantity to form bone, its last function being to unite with the feeble and as yet distincly provisional callus of the medulla.

The third day was a "field day," and was devoted to the introduction of new instruments, apparatus, and patients.

Maas presented his patient with extirpation of the larynx, and demonstrated the specimen extirpated. The subject was a robust countryman, above fifty years of age. He was then wearing a large tracheotomy tube, through which respiration could be heard at any point in the room. Removal of the tube occasioned no disturbance in respiration. The wound looked healthy, and was free from tenderness. Of Langenbeck's case, operated on July 21, 1875, and described in the Journal of April 13, 1876, under the head of "Recent Progress in the Treatment of Diseases of the Throat," I can only add a statement of the operator to the effect that the cricoid, thyroid, and arytænoid cartilages were extirpated. Photographs of this case were presented.

Volkmann, under the head of Casuistische Mittheilungen, described two cases of resection of the knee-joint for tuberculosis in girls of fourteen and six years of age, and showed photographs of the same in right-angled anchylosis; the dressing was by Lister's method and the plaster cast; healing in both cases was by first intention, without any surgical fever, and without a drop of pus. It is proper to add in this connection that Volkmann's brochure on the Lister antiseptic treatment has been translated into English, and is used by Lister himself as one of his, as we would say in America, best advertisements.

Esmarch showed a cooling cover for the trunk (kühldecke), whose purpose is to lower the temperature of the general surface of the trunk, or of the contents of the thorax or abdomen in inflammation. It is a thick rubber sheet three and a half feet long by two and a half feet wide, nearly square, being of sufficient size to cover the body from the shoulders to the hips. One side is flat, and applies directly to the front side of the body as the patient lies on the back. The other or upper side has cemented to it a long rubber tube, calibre five-eighths of an inch or about one and a half centimetres, which, beginning at the upper border of the rubber cover, is coiled in reverse turns from side to side until it reaches the lower border. By this contrivance an open tube of several feet in length, firmly attached by rubber cement to the cover, passes over the body. The idea is to transmit cold air, or, what is better and easier of management, cold water, continuously over an inflamed surface. A few inches of unattached tubing at either end project from the sheet at the upper to allow water to be introduced at the lower to permit its escape without wetting the mattresses of the patient's bed. In the apparatus presented there were thirteen reverses of rubber coil. Multiplied by two and a half, the width in feet of the sheets, there were more than thirty-two feet of water, in a solid column of five-eighths of an inch, flowing of course slowly, to support as weight; this is to be added to the combined weight of the sheet, coil and cement. To conjecture the weight of the cover by holding it at arm's length, I should say that twelve to fifteen pounds would be a safe estimate. The element of weight alone must render the use of cold water by this means in inflammation of the lungs, pleura, and intestines very questionable, although theoretically the idea is an excellent one. The apparatus was much admired for its neat mechanical look.

Langenbeck detailed the following operation, producing the patient. On the 22d of February, 1876, a young man twenty years of age presented himself at the Ziegelstrasse clinic with a large, tough, nearly transverse cicatrix at the middle of the posterior aspect of the thigh. Leg and thigh were in progressive atrophy, and the patient was very lame. The history be-

spoke section of the sciatic nerve, the result of a very severe wound received two and a half years before. It was proposed to unite the ends of the nerve. A long incision, parallel to the axis of the nerve, was made, when, after dissection, the ends were found to lie five centimetres (two inches) apart. The proximal stump was hypertrophied, "swollen," as I heard it described on the day of the operation, to nearly three times its natural size. The distal stump had a similar appearance, though not so exaggerated. Each end was pulled towards the other with the hands, the ends vivified with the knife, and three strong catgut sutures passed through each end from side to side, the faces being brought fast together. The superficial wound was stitched with catgut, and dressed with Lister's bandage. The leg was flexed on the thigh to preserve contiguity of nerve-ends, and laid in temporary flexed splints. After complete healing of the external wound he proposed to use the continuous current. At the clinic Langenbeck described a case of section of the median nerve by a gunshot wound, where he united the edges of the ends, with a good result as to final nerve power. He further detailed a case of an officer who was wounded by a large ball under the coracoid process of the scapula, and who suffered total paralysis of the arm. The severed nerve healed by granulation, as could be seen on account of great defect in the soft parts. The axillary artery was brought to view, and its pulsations could be marked with the eye. In this case there was total section of the nerve, followed by complete union, and after a long time complete restoration of the sensations of the extremity. The patient, operated on in February, has regained partial control of motion and sensation, and the leg and thigh are larger than before the operation. The wound is entirely healed, and pressure at the point of nerve union fails to produce exquisite pain. The continuous current is now his only treatment.

On the fourth and last day of the session Dr. Riedinger, docent in Würzburg, read a paper on fractures of the pelvis, showing preparations. Professor Langenbeck exhibited Adam's trap-door saw for the subcutaneous osteotomy of the neck of the femur; also the extension apparatus brought out by Dr.

Joh. Schmall, of Gratz, and improved by the bandagist Heuberger, of Gratz. Papers were also read on a modification of the Esmarch irrigator, by Dr. Burchardt, of Berlin; on perforation of the mastoid process, by Dr. Hartmann; on an experience in the correction of foot deformities by means of the plaster bandage, by Professor Heineke, of Erlangen; on the operative treatment of intestinal hernia, by Dr. Hadlich, of Heidelberg; on the mechanical interferences of the evacuation of the bladder in old persons, by Dr. Busch, of Bonn, etc.

Professor Uhde, of Braunschweig, exhibited specimens of resected bone, with photographs. Dr. Wolff, docent of Berlin, demonstrated a case of elbow-resection. Dr. George Wagner, for a long time attached to Langenbeck's clinic, and who did important work on Billroth's Surgical Pathology, presented the results of some experimental observations upon the ovaries of rabbits, with reference to human ovariotomy. As to temperature, the removal of the ovary in the rabbit was followed by a higher grade than in the human female. The statement was made that, two hours after the operation of ovariotomy, the temperature of the abdomen reached as high as 35.5° Réaumur, while that of the operating-room itself should be above 24° Réaumur. Ovarian tumors occasion venous stasis, after whose removal air must rush in to fill their former habitat, this agent slowly receding on the imbibition of serum. The final removal of the serum is and must be by absorption, and it is exactly here that the danger following an ovariotomy lies—namely, the insufficiently rapid absorption making septicæmia liable.

He approves of Dr. Sims' drainage-tube, the use of which, as I saw it at the New York State Woman's Hospital in 1873, was a questionable procedure in the eyes of his colleagues. He does not use the Lister antiseptic plan in ovariotomy cases, as to closure of cavity of the abdomen and external wound, but simple injections of weak carbolic acid. German statistics give results much inferior to those of Sims and Wells. It is significant that the former announces twenty successful cases of ovariotomy in succession, followed by seven unsuccessful ones—an evidence not so much of a peculiar method of operative procedure, as of extraneous influences, either in a fortunate selection

of cases or of time of the year. I regret that it is impossible for me to give more detailed notes of this paper, which was allowed two sessions of half an hour each, an unusual indulgence for the surgical society. Its rather novel experiments and exhaustive character, added to the well-known philosophical style of argument of the author, gave it in some respects the greatest prominence of the meeting.

Some features of the session may be of interest on our side of the water. At the entrance door of the afternoon meetings, which were held in the upper hall of the Royal University, sat an official, one of whose functions was to see that every auditor had an "eintritts karte," and to furnish him with the printed register and statutes. The morning sessions were held in the Siegelstrasse amphithetre, known for its steep descent and high-backed seats. The sitting places are solid benches, so high that one's feet can not reach the floor. It is one of the most unsightly and dangerous theatres imaginable; it will next year be replaced by a new and much larger bulding, on whose ground floor will also be held the University ear clinic by Lucae, and the eye clinic by Schweigger. The following statutes will explain the *technique* of the society. Sessions are annual, and from the 10th to the 13th of April, inclusive. The time may, however, be postponed at the option of the President. The following officers are annually elected, and constitute the bureau of the Congress: A President, Vice-President, two Secretaries, and a Treasurer. This bureau has jurisdiction over changes in the statutes and daily programme of work; determines eligibility to membership; provides for the publication of the proceedings; and takes charge of the archives and moneys of the society. The annual assessment is twenty marks, about five gold dollars. In the sessions of the Congress, demonstrations take precedence of papers. The latter must not occupy over thirty minutes in delivery, though the presiding officer may exercise the liberty to add ten minutes. Discussions must be in five-minutes speeches.

Aside from the names given as author of parts in this Congress, the following prominent surgeons are members of the society: Professor Thiersch, Leipzig; Professor Baum, Göttin-

gen; Professor Bergmann, Dorpat; Professor Billroth, Vienna; Professor von Brans, Tübingen; Professor Grafe, Halle; Dr. Grimm, general staff physician, Berlin; Professor Richter, Breslau; Professor Simon, Heidelberg; Professor Hueter, Greifswald; Professor Wilms, Berlin; and Dr. Ziemssen, Aachen.

Professor Ernst Leyden, of Strassburg University, has been elected Professor of Internal Diseases, and to the direction of the Corresponding Department of the Charité, positions made vacant by the death of Louis Traube. He enters upon the duties of the chair with the fall semester. Traube's clinic had been conducted for some time by his son-in-law, Professor Fraentzel.

It is a remarkable fact that almost the first official act of Mr. Falk, the Minister of Ecclesiastical Affairs and of Education, was to promote Traube to the position of ordinary professor. This was in 1872. Traube was made private docent in 1848, and, although in the succeeding twenty-four years he became Schoenlein's assistant, and ultimately had his own clinic on chest diseases, his Jewish proclivities prevented his proper recognition by the Prussian state. His promotion was the direct effect of the policy of Bismarck, and his lieutenant, Mr. Falk. It not only recognized the talents of a great man, but indicated the political thought of the German confederation. The renowned Graefe suffered in the same way, having never lectured at the Charité as a professor; the cause of his treatment by Prussia was based, however, on other grounds than those of Traube. I learn that their misfortunes at the hands of the University and the Government made them strong personal friends.

A sketch of Virchow as a politician, by Herbert Tuttle, of Berlin, formerly of Boston, is just out of the press of Putnam, of New York. So far as I know, it is the first sketch in English of this versatile genius. He is now the leader of the party of progress (*Fortschrittspartei*), in whose service as a political leader he has worked since the events following the Revolution of 1848. The sketch attributes his early prominence as a politician to his authorship of the System of Cellular Pathology. It forms one of nineteen sketches of the book, whose title is

German Political Leaders. Virchow is classified with the "scholars in politics."

To-day's papers contain the following telegram from Hanover: General staff physician on duty, Dr. Louis Stromeyer, who a short time ago celebrated the fiftieth anniversary of his doctorate, died in Hanover, on the 15th inst., at 10 A. M., of apoplexy, in his seventy-third year. Yours truly, MED. —*Boston Med. and Surg. Jour.*

CHEMISTRY AND PHARMACY.

"Diruit, ædificat, mutat."—HOR.

Ointment for Sycosis.—Dr. S. Smith, of New London, Conn., advises the following formula for an ointment, which he has used for several years, with unvarying success, in the cure of this intractable affection: ℞. Acid tannic, gr. xv.; sulphur, gr. xij.; aquæ, ʒ ijss. Apply a quantity the size of a pea to the affected spot every morning and night.

A Convenient Local Anodyne.—Take of elastic collodion, one ounce; hydrochlorate of morphia, fifteen grains. Dissolve the morphia salt in the collodion. Spread, with a camel hair brush, some of this solution on the painful part, and place some oiled silk over the spot. The effect is stated to be most satisfactory.—*Lancet.*

Ozone.—M. Leuder proposes the following powder for the generation of ozone: Equal parts of peroxide of manganese, permanganate of potash, and oxalic acid; for a medium-sized room two tablespoonsful. When water is added the ozone is rapidly generated.

Photography as a Detective.—Recent attempts at forgery, says the "Scientific American," by the alteration of the dates and amounts of written checks and drafts, have resulted in investigation as to how erased writing may be rendered visible.

Various chemical processes, more or less efficacious, have been suggested, but the simplest process yet devised seems to be the photographing of the suspected paper.

This is founded on the fact that certain colorless or feebly colored substances, while very slightly affecting the eye, act powerfully upon the sensitive film in the camera. Photographers are aware that a photographic proof nearly effaced through age may, by photography, be reproduced with all its primitive detail and intensity. Generally all yellowish stains may thus be brought out; and peroxide of iron in the smallest proportion, so as to be practically imperceptible to the eye, gives proofs of great clearness.

Common ink, says M. Gobert, to whom is due the credit of the suggestion, is a compound of tannin and oxide of iron. Now it matters little what chemical means are used to remove the ink-marks; for however carefully the chemical be applied, some traces of peroxide of iron are sure to be left either on the surface or in the substance of the paper. It is only necessary, therefore, to photograph the sheet, and to enlarge it besides, to bring out in the proof the effaced writing in an entirely legible condition.—*Bost. Jour. of Chem.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A Treatise on Diseases of the Nervous System. By W. A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System in the Medical Department of the University of the City of New York, etc., etc. Sixth Edition. New York: Appleton & Co.

I have read this book of 876 octavo pages most carefully, and will endeavor to furnish the reader an outline of it. It embraces a large number of facts relative to the pathology of the nervous system, which will be valuable to the student in relation both to physiology and pathology.

In the introduction of nineteen pages, a description is given

of the implements used by authors in investigating nervous diseases. These consist: 1st. Of the ophthalmoscope; 2d. Of the cephalohæmometer; 3d. Of the œsthesiomometer; 4th. Of the thermometer, including Becquerel's disks, Dr. Lombard's thermo-electric differential calorimeter; 5th. Of the dynamograph; 6th. Of Duchenne's trocar and several forms of electrical apparatus; 7th. Of cauterizing apparatus; and 8th. Mention is made of other instruments and apparatus, as to microscope, stethoscope, ear specula, tuning fork, urinary test apparatus and chemicals, hypodermic syringes, and Richardson's spray apparatus. The description and uses of these instruments are given, with several illustrations.

The book is divided into five sections. Section first is devoted to the diseases of the brain, and is divided into fifteen chapters.

The first chapter is on cerebral congestion, which is divided into active and passive, and comprises twenty-three pages. One of the earliest symptoms of active cerebral congestion, he alleges, is *wakefulness*. Throughout the work he lays much stress on wakefulness as indicative of a superabundance of blood in the brain, and attempts to prove it by the use of the *cephalohœmometer*, and by examination of the optic disks with the ophthalmoscope. In all cases where the brain is congested, the optic disks are also congested. In conjunction with wakefulness the mental powers show disturbance, ideas become confused, temper irritable, and emotions active; then there is vertigo, noises in the head, flashes of light, and black spots in the field of vision; there is flushed face, throbbing carotids, twitchings of the muscles of the face, and bleeding from the nose; there is numbness of the limbs and impairment of muscular power, the speech is more or less impeded, and all the organs of the body are more or less disordered. Sometimes the symptoms are so grave and frightful that friends become anxious; generally, however, the patient pursues his ordinary avocation. All these symptoms may disappear spontaneously, or in consequence of appropriate treatment. Spontaneous cure, the author states, is rare; yet, under his observation, ninety-five per cent. of the cases were cured or relieved, while he witnessed not a single instance of spontaneous cure.

The reader of this will hardly fail to express, from such facts, his admiration of medical skill; for this first stage of cerebral congestion, unless treated, will pass into the *second stage*, and assume either the apoplectic, the paralytic, the convulsive, the soporific, the maniacal, or the aphasic form, and these are liable to be blended, the one with the other. The effect of these forms is to induce the third stage of active cerebral congestion, which stage is characterized by feebleness of mind and body, pain in the head, vertigo, and gastric derangement.

Passive cerebral congestion is the result of causes which increase the amount of venous blood in the brain. The symptoms are similar to those of active cerebral congestion, except that there is stupor and sleeplessness attended with dreams. This passive congestion is liable to sudden increase, and to be followed by effusion; and thus the disease assumes, or may assume, all the forms mentioned as symptoms of active cerebral congestion, which he calls the second state. The forms mentioned may vary in character from those of active congestion.

The *causes* of active cerebral congestion are those influences which increase the quantity of arterial blood in the brain; the causes of passive congestion are those which increase the amount of venous blood in the same organ. The author's own experience in six hundred and twenty-two cases, which occurred in his practice in New York from January, 1865, to December, 1870, shows that the disease comes on in all seasons, but least in October and most in December. His subsequent experience is to the same effect. Passive cerebral congestion is more common in cold weather. Direct rays of the sun, certain winds, electrical states of the atmosphere, unhealthy situations, too much food by rapid eating, sudden physical exertion, a dependent position of the head, constriction of the neck, certain articles of food and medicines, tumors of the neck, various diseases, as embolus, thrombosis, apoplectic clots, nitrite of amyl, fevers, hypertrophy of heart, long-continued mental exertion, emotions, etc., are mentioned as causes of cerebral congestion.

The *diagnosis* is discussed at considerable length by the author, but not made clear. The distinction between cerebral con-

gestion and cerebral anæmia is best effected, he asserts, by the opthalmoscope.

The *prognosis* is more favorable in active than in passive cerebral congestion. If the disease be treated before the first stage has passed, a favorable result may be predicted; but if the malady be neglected, or the habits of the patient be bad, or lesions occur, then prognosis becomes more unfavorable. Within eight years in his own practice he treated one hundred fully-developed cases, of which eighteen died.

The morbid anatomy of cerebral congestion consists of increased size of the blood vessels in the brain, increased consistency of the white tissue of the brain, and the gray matter assumes a red or violet hue. Sometimes there is subarachnoidean effusion. In passive congestion the various sinuses are the seats of vascular turgescence.

The *pathology* consists of there being an excess of blood in the brain.

For the *treatment*, in the active form, the indication is to lessen the force and quantity of blood in the brain; in the passive to increase the force and diminish the quantity. The means used are leeches to the temples, cold to the head and neck, galvanism to the head, and the administration of bromide of potassa, of sodium, and calcium, ergot, oxide of zinc, strychnia, phosphorus, phosphide of zinc, digitalis, nutritious food, restricted use of alcohol and tobacco, exercise in the open air, bathing and frictions, and abstinence from mental exertion and anxiety, and avoidance of the causes. The hygienic part of this treatment is well enough, and will, I believe, cure the large majority of his patients, especially if he will add, as occasion may require, some mild aloetic aperient. I am fearful his electricity, bromides, phosphorus, and the phosphites are hobbies; at least no precision is given as to the exact conditions in which these rather doubtful remedies are to be prescribed. Suppose electric currents are sent through the head, and the blood vessels do contract and lessen the quantity of blood in the brain, as is evidenced by observations on the retina, yet this effect can be but temporary. I should rather fear the effect would be to increase irritation of the brain structures and do harm.

The bromides and the ergot are more plausible remedies, yet their value must be tested further than has been recorded before the judicious physician will rely on them. I can not see the propriety of using phosphorus in any form of cerebral congestion.

Chapter II. treats of cerebral anæmia. The terms cerebral and spinal anæmia ought, in my opinion, to be expunged from medical literature. They lead to confusion. There are, undoubtedly, states of cerebral and spinal anæmia as a result of general impoverishment of the system; then, again, we have the same from shock of the nervous system produced by severe injuries; and, in a lighter degree, from irritants acting on the system, or as an effect of emotions. In the pallor of the incipient symptoms of epilepsy there is a momentary anæmia, both of the brain and the spinal cord, from contraction of the arteries. Strong emotions, as those of fear, produce the same pallor, the same anæmia, and the same vascular action. I would interpret these phenomena as indicating an irregular circulation rather than anæmia in the nervous structures, and as leading to mal-nutrition, and, ultimately, to organic change. The author mentions drowsiness as an indicative symptom of cerebral anæmia. I doubt the correctness of this, because immediately after an epileptic convulsion drowsiness succeeds, and is a part of the epileptic phenomena. The brain certainly is loaded preternaturally, at least, with venous blood, as is evident from the state of the veins of the neck, face, and scalp.

The treatment of cerebral anæmia, according to the author, is the reverse of that for cerebral congestion. Electricity, iodide of potassium, and ergot are injurious, as still further increasing the state of anæmia. The remedies indicated are alcohol, ammonia, nitrite of amyl, ferruginous and bitters tonics, moderate mental exercise, good food, and removal of the causes.

I must here mention those remarkable cases of what Dr. Sayre, of New York, calls spinal anæmia from preputial irritation, published in this Journal, and also among the proceedings of the National Medical Convention for the year 1875. From what circumstances in these cases Dr. Sayre inferred spinal anæmia is beyond my conjecture, unless it be that he was an

associate of Dr. Hammond. In those cases there was an almost continuous excitation transmitted from the prepuce and glans penis along the incident spinal nerves to the spinal centres. This irritation, on the one hand, would set up reflex, or more properly incoördinate muscular action; and on the other hand, the excitation transmitted to the spinal centres would be deflected to the ganglionic centres, which govern, in a great measure, the circulation of arterial blood. In this way there was produced a *disturbed* circulation in the spinal centres, and in consequence a perverted nutrition, leading even to organic changes in the nerve structures. But I can not see why this perverted nutrition should be denominated anæmia.

The chapter (III.) on cerebral hæmorrhage is interesting to the student of the nervous system. Effusion of blood may take place in any part of the encephalic mass, and if we could accurately trace from the several localities of the clot and the special symptoms resulting, it would aid greatly in studying the physiology of the brain, but that we can do with no degree of certainty. If the clot is found in the right corpus striatum there is always paralysis of *voluntary* motion on the left side of the body, and vice versa; if the clot is found in an optic thalmus there will be perverted or loss of sensation on the opposite side of the body; or if the clot is found on the pons there will be paralysis of both sensation and motion; if the clot is in the anterior lobe of the brain, near the fissure of Sylvius, there is likely to be aphasia; but if other parts of the brain be the site of the clot, we have not the key to unlock the different combinations of the cells of the brain to enable us to trace the effect.

The *causes* of cerebral hæmorrhage are found to arise from injuries, or from lesions in the brain, the result of malnutrition, especially of the blood vessels. Passive venous congestion is often the immediate cause of the hæmorrhage, but when a blood vessel gives way under these circumstances there has been a pre-existing disease or degeneration of their walls. The venous congestion is produced by agents which prevent the return of venous blood from the head, as muscular effort or too tight a cravat, emotions and convulsions. The author alleges

that these attacks of hæmorrhage do not occur as frequently during sleep as during the wakeful hours; and this opinion is deduced, I suppose, from his theory of cerebral congestion, and from his experiments with the cephalohæmometer instead of from observation.

The *treatment* of cerebral hæmorrhage is divided into three stages—viz., the prodromic, the seizure, and the consequences of an attack. In the prodromic stage the bromides, especially the bromide of calcium and oxide of zinc, are chiefly relied on, with warm water enema if the bowels are costive, and an emetic if the stomach is loaded.

The propriety of emetics is disputed, as I remember the English physicians quarreled over the case of the Duke of Wellington on that point. The old Duke had eaten a plum pudding for dinner, and the question of dispute was, which was the greater evil, the pudding in the stomach or the venous turgescence of the head, which attends the act of vomiting. In the midst of the controversy the old Duke died.

In the state of seizure, the author advises quietude and elevation of the head, deprecates the lancet, and if he judges hæmorrhage still going on, he gives ergot with no "sparing hand." If inflammatory symptoms supervene after the appearance of paralysis, he uses cold to the head, blisters to the nape of the neck, and mustard plasters to the wrists and ankles. In two weeks after such hæmorrhage with paralysis, he begins the use of strychnia phosphorus, electricity, and passive motion.

The author reports sixteen cases which occurred in his own practice, and all but two were cured, or relieved by hypodermic injections of strychnia. In these cases he used from six to thirty-five of such injections. He does not tell at what intervals they were given. About one-twenty-fourth of a grain is used at each injection. I find mentioned by the author that in paralytic or neuralgic affections he injects the strychnia into the affected muscle or nerve. The simple introduction of the medicines into the cellular tissue would be quite as effectual, and Dr. Charles Hunter, whom he quotes, quite agrees with me.

In these paralyses resulting from cerebral hæmorrhage the phosphide of zinc is recommended. This preparation of zinc consists of three equivalents of zinc and one of phosphorus; three grains of thin phosphide are mixed with a sufficient quantity of conserve of roses, and divided into thirty pills. The dose is one pill three times a day.

Electricity is also recommended to be passed in moderate currents through the affected muscles. Either the direct or the induced current may be employed.

Chapter IV., on cerebral meningeal hæmorrhage, is unimportant, and should have been included in the chapter on cerebral hæmorrhage; and the same may be said of his *pachymeningitis* and *hæmatomata* of the dura mater. The diagnosis of these affections is difficult and the prognosis bad. In cerebral meningeal hæmorrhage there is more abolition of the intellectual functions and less paralysis than in central effusions. All remedial means are generally found useless.

Chapter V. occupies twenty-seven pages, under the heading of "Partial Cerebral Anæmia." This anæmia results from obstruction of the blood vessels of the brain by an embolus or thrombus. As a consequence the circulation is cut off from certain parts of the brain and its nutrition becomes defective. Of course various cerebral symptoms would come on. The portion of the brain deprived of blood would undergo disorganization, or a collateral circulation would be formed, and the organs would regain, at least partially, their integrity or function. The symptoms from such changes in the brain are various, as paralyses, mental derangements, morbid sensations; symptoms so various and complex that any arrangement of them would be useless, yet the author divides the subject into four classes—viz., thrombosis of the arteries; embolism of the arteries; thrombosis of the veins or sinuses, and embolism or thrombosis of the capillaries, and gives the symptoms, causes, diagnosis, prognosis, morbid anatomy, pathology and treatment of each. No distinctive treatment is recommended for any of these conditions, except the use of bromide of potassium, electricity, strychnia, etc., as symptoms may arise which point out their uses. There is one view of this subject of embolism of

the vessels of the brain, or indeed of any other organ of the body that is important in its practical bearings. During the course of many diseases attended with a morbid condition of the blood, sudden insanity, paralysis, suppression of the urine, or other conditions supervene which puzzle the practitioner and lead to false practice. These conditions are results of embolism more frequently than is suspected. The practice too often in such conditions is to subject the patient to polypharmacy. Little can be done except to support the power of life and restore to the muscles their lost contractility.

Chapter VI is on cerebral softening. When this takes place it means simply that a portion of the brain substance has lost its vascular supply, and as a consequence its nutritive activity, and disintegration follows. The symptoms of course are numerous, and are found to consist of partial loss of voluntary motion, sensation and intellection. The emotions may be stilled or augmented. These symptoms vary according to the particular part or tissue of the brain involved in the morbid action. The author's account of the malady is altogether satisfactory in every respect, except that in speaking of paralysis here and elsewhere through the book, he makes no distinction between volitional paralysis and that which arises from diseases of the spinal cord, yet the distinction is complete. In volitional (cerebral) paralysis the affected muscles maintain a certain fixedness, and the flexors are contracted; on the contrary, in paralysis from disorganization of the spinal cord, the muscles are flaccid. In paralysis of the bladder from cerebral disease, or from disease of the upper part of the spinal cord, there is retention of urine; the sphincter of the bladder fails to respond to the mandates of the will, remain contracted, and retention of urine follows as a consequence. On the contrary, when the lower part of the spinal cord is in a state of disorganization, the influence of the will and of the spinal marrow are lost, the sphincters are flaccid, and the urine dribbles away unconsciously. The flexed and contracted state of the muscles is not due to cerebral disease, in what is called cerebral paralysis, but rather to the failure of the will-power to antagonize the normal but uncontrolled spinal power; the physiological muscular tension.

Chapter VII. is devoted to the subject of aphasia. Those who have a curiosity on this subject should read this chapter. A brain lesion of the third convolution of the left anterior lobe of the brain near the fissure of Sylvius is believed to be the site of the disease. The author relates a case which came under his observation which illustrates the seat of the disease so as to be of practical value. A man had received a blow on the left side of the head at the junction of the frontal with the temporal bone, and became aphasic. Dr. Sayre was advised to trephine the patient, which he did, and the "inner table was found to be fractured, and a splinter was pressing on the anterior frontal convolutions. It was removed, and, as soon as the patient emerged from the anæsthetic condition, he spoke perfectly well." It would be interesting to know of the subsequent fate of this patient, but the author has failed to tell us.

Chapter VIII. is on *acute cerebral meningitis*, of which a very complete account is given. In the acute stage, while he speaks favorably of bloodletting and purgatives, he relies on his hobby, the iodide of potassium, upon the same principle that he advised its use in acute cerebral congestion. Why not ergot on the same principle?

Chapter IX. is on *chronic cerebral meningitis*, which is discussed at great length. When the malady is suspected to be of syphilitic origin, iodide of potassium is the specific; otherwise, the bromide is adhered to, especially when and as long as there is active congestion, as shown by the ophthalmoscope.

Chapter X. is on *tubercular cerebral meningitis*. The description and symptoms of that dire malady will not be recognized as exact by those who have seen much of the disease, especially as it occurs in children.

Chapter XI., on *suppurative encephalitis* or *cerebritis*, affords but little interest either in pathology, symptoms, or treatment.

Chapters XII., XIII., XIV. treat of *diffused cerebral sclerosis, multiple cerebral sclerosis, and tumors of the brain.* The underlying cause of all these conditions of the brain are causes or conditions which disturb the nutritive process, just as similar changes from similar causes take place in other parts of the body. In sclerosis the inter-neurine spaces become filled up

and made dense by deposits from the blood vessels; the neurine structures become compressed and suffer from atrophy, and finally fail to perform their proper functions; and the symptoms which follow are as various as there are different structures of neurine in the encephalon. The same may be said in substance of cerebral tumors. The contracted muscles (limbs) are clearly due, in my opinion, to abeyance of volition over the muscles, and to the uncontrolled action of the spinal marrow upon them. Notwithstanding the gloomy prognosis, our author still has faith in specific medication. He relies on the primary galvanic current from one mastoid process to the other for a period not exceeding three minutes every other day, and on three-grain doses of the chloride of barium in solution three times a day. The bump of hope and the bump of perseverance of our author must be large, and the bump of faith as large as he who prescribes the thirtieth dilution.

For tumors of the brain, especially of syphilitic origin, he gives, three times a day, a teaspoonful of a solution of two grains of bichloride of mercury and five drachms of iodide of potassium in four ounces of water. With this remedy and electricity a cure was complete in a few weeks!! The syphilitic taint can not always be made out, but acting on the supposition that it exists, he says: "I have several times succeeded in curing patients who exhibited the most positive indications of suffering from tumors of the brain."

The next (XV) chapter is on *insanity*. The subject is discussed at considerable length, and what is known of it is tolerably well brought forward.

In treating insanity, the author takes the standpoint that it is a physical disease, not a "metaphysical nonentity." The key-note of his pathology is the condition of the cerebral circulation. There is either too much or too little blood in the brain, according to him; and his practice is guided, in a measure, by this theory. In the present state of our knowledge of the conditions which produce brain activity or brain abnormity, we had better follow in the treatment and management of insanity the maxims of Sydenham—to do that which does good, and withhold that which does harm. In insanity there is a

possibility of a condition of erythismus of brain action, just as we have reason to know there is in the spinal marrow. The condition referred to is sometimes denominated *augmented excitability*. The relation of this condition with that of increased or diminished cerebral circulation is not satisfactorily made out. I think it most probable that it is due to an irregular supply of blood, and as a consequence to an irregular nutrition of the neurine. Of course there must be some underlying cause disturbing the nervous system; and this cause, according to my opinion, acts on the peripheral nerves of the spinal marrow, producing, indirectly, disturbances of the nutritive processes. It will be in vain to look into the morbid anatomy of the brain for the conditions which produce insanity. We find there the effects of the disease rather than the cause. As well look into the ruins of a conflagration to find the igniting spark, as into the encephalon to find the cause which leads to insanity.

But to return to our author. When he finds cerebral congestion, as ascertained by the use of the ophthalmoscope, he advises the bromide of lithium in large doses, as much as sixty grains every two hours until half a dozen doses are given, then to continue it in smaller doses three or four times a day. In cases of cerebral congestion attended with illusions, but not mania, the other bromides will answer, but preference is given to bromide of sodium. When mental excitement is subdued, he gives three times a day half a drachm of dilute phosphoric acid. The nitrite of amyl is highly and hopefully spoken of by the author. He speaks of one case of a patient who had been in a lunatic asylum for six months that was completely cured in five weeks by inhaling ten drops of the substance six times a day. Of course, according to his theory in this case, there was anæmia of the brain, and the remedy cured by dilating the arterioles of the brain, and thus letting in a greater supply of blood. He regards the hydrate of chloral as a dangerous remedy, and in this I fully agree with him.

I regard opium as the most valuable remedy we possess in the treatment of insanity. In using it I am not guided by any theory concerning too much or too little blood in the brain. Unless it manifestly disturbs the system or increases the mental

excitement the remedy should be continued. Recently, in a case of insanity of four months' duration, with the strongest suicidal tendency and wakefulness, I prescribed, in consultation with the editor of this Journal, ten drops of the acetum opii three times a day, with an increase of one drop a day, until quiet and refreshing sleep were obtained. The medicine was continued until thirty drops at each dose were administered. The patient steadily improved, and to-day shows no mental impairment. She suffered no inconvenience from the withdrawal of the opium. As good a diet as the digestive organs would permit, and an occasional dose of castor oil, were the only other means employed. The diet of the insane should be as generous as the state of the digestive organs will allow; but it should be borne in mind that indigestion is often one of the primary factors of insanity.

The remainder of this book, which constitutes more than half of it, must be noticed, because of the valuable facts it contains, and because of egregious heresies intermingled with the facts, but this task must be deferred for another number of this Journal. B. M. W.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Quinetum.—A preparation of the whole alkaloids separated from East India red bark has been used for some time in the Indian hospitals, as well as in private practice, with great success. The concurrent testimony of medical men in our Indian possessions is to the effect that quinine is not so greatly superior to the whole alkaloids as to make it worth while to separate the sulphate in its pure state. Mr. Thomas Whiffen, of the Quinine Works, Battersea, now offers to the Profession a similar preparation, which he calls quinetum. It is in the form of a fine granular non-adherent powder of a pale buff color. The proportions of the various alkaloids present will of

necessity vary with the sample of bark used; but, we think, not so much as to be of moment therapeutically. Sulphate of quinetum is a white crystalline body with a faint pink tinge, greatly resembling sulphate of quinine; and we are informed that the preparation can be supplied to the Profession at about one-half of the cost of quinine.—*Brit. Med. Jour.*

Eucalyptus Globulus in Pulmonary Gangrene.—Of all the drugs employed by Dr. Bucquoy (of Cochin Hospital, Paris,) in pulmonary gangrene, none, he asserts, have given him better results than eucalyptus globulus. He uses it in the form of an alcoholate—two grammes—(half a drachm) daily in a mixture of water, gum, orange-flower water, and syrup. Out of the various cases he has had under his care at Cochin, five ended in cure, whilst in all the others there was a favorable modification of the odor of the breath, the sputa, and the violent cough, after carbolic acid had failed.—*Lancet.*

The Power of Steam.—Recently, during one day, Whit Monday, 246,547 passengers were carried on the Metropolitan Underground Railway, London, being at the rate of ninety millions of passengers per annum. The stations are half a mile apart. The trains run every two minutes; they consist of twelve cars each, and are drawn by locomotives weighing forty-five tons each. They discharge and take up a load of passengers, run to the next station, and stop, all within the space of two minutes.—*Exchange.*

MEDICAL NEWS.

'Nulla dies sine linea."

The Convention of Medical Colleges has now adjourned for more than two months, and yet not a single college represented has publicly endorsed the proceedings. Several colleges, however, though not accepting the views declared by the Con-

vention as a part of their official principles, have not hesitated to largely use these views in their catalogues with the expectation of securing pecuniary profit! There were of fifty-two colleges in this country only twenty-two present; most of the oldest and best colleges repudiated the whole movement. The resolution introduced by Professor Curtis, of Chicago, and adopted, was intended to force students to graduate in Winter Schools; it is in design very transparent, and in composition very amusing; a perfectly ingenious piece of literary Mosaic. It reads thus: "That it is the opinion of this Convention that no two consecutive sets of lecture tickets shall be regarded as fulfilling the usual pre-requisites of instruction for graduation, where the time between the beginning of the first course and the end of the second is less than fifteen months." This resolution, if carried into effect (and not, as it deserves to be, ridiculed) would destroy the University of Virginia, whose diploma is far superior to that of any college represented in the Convention; many of these colleges not even having been heard of until bulletined by the Secretary of that classic and remarkable Body. Are the colleges represented ashamed of the proceedings on record? If not, why are these not officially and publicly endorsed? Is the whole movement to be (as it is now) a mere sham, gotten up for introduction into college catalogues? ——*Dr. Walter Channing* died July 27th, in his 91st year.——*Dr. James R. Chadwick* has resigned his position as Lecturer on Diseases of Women in Harvard University.——*At an informal meeting* held in Philadelphia, at the rooms of the section of practical medicine, of the American Medical Association, Wednesday, June 7, 1876, after the election of a chairman and secretary pro tem., it was resolved to call upon such American physicians as had evinced a special interest in dermatology to unite in forming an American Dermatological Association, and that the meeting for organization be held in the University of Pennsylvania, Philadelphia, on Wednesday, September 6, 1876, at 6 P. M., or immediately after the close of the meeting of the section of dermatology and syphilology, of the International Medical Congress, on that day. All those who are desirous of joining this association can confer with the Secretary,

Dr. Bulkley, of New York, or the chairman, Dr. Wigglesworth. ——*Appointments*—Dr. C. O. Curtman has resigned the chair of Chemistry in the Missouri Medical College, and Dr. O. A. Wall has been appointed in his place. Dr. G. W. Hall, in the same College, has resigned the chair of Physiology, and is succeeded by C. A. Todd. Dr. J. P. Kingsley succeeds Dr. Wall in the chair of Materia Medica.—*New York Med. Jour.*—— *Changes in the University Medical College.*—In the Department of Medicine in the University of the city of New York the following changes have taken place: Professor Charles A. Budd has resigned the chair of Obstetrics, Diseases of Women and Children. He has been elected Professor Emeritus of that chair, and will hold a weekly clinic. Dr. J. Williston Wright has been appointed Lecturer on Obstetrics and Diseases of Women and Children, and will give the lectures on obstetrics during the coming session. Professor J. W. S. Gouley has been reäppointed to the chair which he formerly held, viz., that of Diseases of the Genito-Urinary Organs. Dr. Robert Watts has resigned the position of Clinical Lecturer on Diseases of Women; Dr. Erskine Mason that of Professor of Clinical Surgery; and Dr. Walter Gillette that of Adjunct Professor of Obstetrics.—*N. Y. Med. Jour.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The American Medical Association.—The last meeting of this Body was almost a failure. The preparations for it were unworthy of all concerned. The Body was badly officially lodged. It was neglected. It met with little or no local support. The administration of important details was inefficient and imperfect. The work done was inferior, and the whole Convention was nearly an absolute failure.

The address of the President has since been published, and deserves very frank and free criticism. The very many friends

of Dr. Sims are surprised that he did not use so great an occasion for a thorough résumé of gynæcology; a subject which would have been most appropriate, and one which he could have discussed efficiently. In the place of this, he selected several important but most common-place subjects, and he did not present them even in a common-place way. His claim that in future the negro and the woman are to be admitted without question, because they will come from medical societies and not from hospitals and colleges (now unentitled to representation), is not only illogical in the extreme, but there is really no connection whatever between his premises and his conclusion. His stating, too, that the Association was now "a really representative Body," since colleges and hospitals are now unrepresented, is startling; for that a Body losing a large portion of its representatives (constitutionally provided for) becomes thereby more of "a representative Body," is, to say the least, something unprecedented in logical deduction.

His discussion of the education subject was very unfortunate indeed; and his statement that the Harvard degree was the only valuable American degree, must meet with very general censure. All admit that where each degree granted brings to the Faculty thirty dollars, such a condition is unfortunate, and the tendencies unsatisfactory or even dangerous; but it is going too far to assume that because a Faculty loses or gains thirty dollars by the rejection or passing of an applicant, that such a Body becomes thereby so unreliable as to compromise the value of the diploma. There can be no question, however, that money should not be involved in any ballot either in a college or elsewhere; the law rejects every such vote, and equity has never elsewhere sanctioned or sustained it. Applicants for graduation should be examined by an impartial Public Examining Board, this Board to be paid by fee for their labor irrespectively of the result; and the Faculty should not only have no money interest in the matter, but they should not constitute the Examining Board. Dr. Sims was, however, going too far when he assumed that on account of a money interest in the ballot, degrees were too easily obtained, and that the Harvard degree was, therefore, preëminently valuable.

As to the graded system, lauded by Dr. Sims, it is but an experiment so far; one that can not or will not be generally adopted by students; and it is certainly questionable whether the system has even the advantages of the old method, where there is the constant, consecutive, and immediate application in one lecture-room of the facts obtained in another. Certainly the President of the Association, in dealing with these questions, did not do them or the occasion justice. He was most unjust to himself.

His recommendation to abolish the Code of Ethics, because physicians violating its inculcations are not duly and always punished, was a most remarkable one. To abrogate all laws because existing laws are not efficient, is a proposition absolutely condemned in the mere statement of it. In this respect the address of the President of the Association will be justly and universally censured. When physicians are obtaining daily and surreptitiously editorial notices in newspapers; when they publish elaborate postal-cards and distribute these actively, giving to the Public all details of their office conveniences, personal history, and professional claims to public confidence; when such cards often contain references unauthorized, or the statement of the use of secret methods of cure; when such cards are posted on trees, outhouses, and distributed in families attended by other physicians; when, in public addresses, physicians stand up unblushingly and boast of successes to be published in the daily prints; when every unfair advantage is daily taken and every unworthy device actively adopted, even with the existence of the Code of Ethics and the danger of being consequently punished, all will admit that the condition of affairs is bad enough; but to abolish the code and inaugurate thereby a reign of chaos and misrule, every one will condemn. What would professional soldiers say to the proposition to abolish the laws and the usages of war because there are guerrillas active and unprincipled; or what would the naval officers of the civilized world say if it were proposed to abolish their flag because pirates prey upon mankind? It is difficult even to imagine how any one in or out of the Profession could make the proposition urged by Dr. Sims; but that it should be made

by the President of the Association to a Body which had created or adopted the code, and which recognizes it as its basic organic law, is something beyond comprehension.

As to the President's recommendation in regard to syphilis and its control, wonder and surprise are even more extreme. To advise (as Dr. Sims has done) the creation of a Board of Medical Examiners, whose duty should be to examine every man, woman and child arriving in this country, and to send all diseased to hospital until cured; and to organize a Board of similar examiners in conjunction with every Municipal Board of Health, and send these men to examine the inmates of all suspected houses, and send the diseased also to hospital until cured; this is to advise a course which, if carried into execution, would induce the world to believe that medical men were absolutely insane; more mad than those alchymists of old who expected from a seething cauldron filled with horrors to evoke a blessing to themselves and humanity.

Can any one imagine the scenes which would be enacted on board of every newly-arrived vessel, or in the dens of prostitution, or in suspected habitations if such a scheme were attempted. Even with skilled dermatologists it would be transferring hell to earth, but with the rude, the incompetent, the often brutal examiner, what language could depict the result? And when this was all effected, the advice next is to send an incurable disease to hospital and there to remain until "cured"!! Here the address terminates!! A most lamentable and wonderful production.

It was a stupendous blunder, and the many and sincere friends of its author are filled with surprise and regret. The Press has had to perform a sad and unwelcome duty.

Late Issue.—A great pressure of work has delayed the issue for August.

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—*Ergot.* By H. J. WATSON, M. D., Wingo Station, Ky. [Read before the Southwestern Kentucky Medical Association.]

A practice wholly in the country offers but meagre facilities for observation and investigation of any given subject. We are debarred of the benefits to be derived from attendance on hospitals and of a concentrated practice, as is enjoyed by our brethren in cities; and in consequence of our cases being so scattered over a large territory, we often necessarily fail to see them at the proper time for making scientific observations.

I shall not attempt to exhaust this subject, nor will I appropriate much of the investigations of better qualified men, but will confine myself mainly to my own experience with the drug.

Ergot stands, and has stood for seventy years, preëminently prominent before the Profession, both in this country and in Europe, as our most reliable parturient. Its power as such has long since ceased to be a subject for argument. It was, as we are informed in the United States Dispensatory, first brought prominently before the Medical Profession as a remedy in the practice of obstetrics by Dr. Stearns, of Saratoga county, N. Y., in 1807.

I shall only speak of it as a parturient for the purpose of reminding some of the younger members of the Profession (for I have met with some not, however, members of this Body

that did not seem to know it) that whilst, in a proper case and at the proper time, it may be relied on as a powerful agent for good, it also has the power, injudiciously applied, of doing great harm. I think I administered it on one occasion when the effect was bad and the result very unfortunate. My patient was twenty-five or twenty-six years of age; third pregnancy. She was in labor some thirty-six to forty hours when the first child was born. Ascertaining that there was another in utero, I waited patiently some two or three hours, whilst the pains recurring regularly were weak and inefficient. Ascertaining that the presentation was normal (being the vertex), I concluded I had an undoubted case for the use of ergot, I accordingly administered the fl. ext., ℥ss., and in thirty or forty minutes repeated the dose. In a short time after the second dose was administered the pains became very severe, and continued without the usual intermissions until the child was born, bearing strong evidence of having been asphyxiated, as I should suppose, from compression of the cord.

I entertain but little doubt that the severe, prolonged, and continuous contraction of the womb caused death by compressing the cord and thus arresting the fœtal circulation. Now, I ask, was I justified, under the circumstances, in administering the ergot? I think I was; for I certainly had all the requisitions that the book-makers deem necessary—viz., a normal presentation, lingering and inefficient pains, with undoubted dilatation of the os, and also of the external parts, as the first child had already passed through them. So that, under similar circumstances, I should feel justified in pursuing a similar practice. We should, however, always, before giving ergot in such cases, be fully assured that we have a favorable presentation and dilatation, or certainly the dilatability of all the soft parts through which the fœtus has to pass.

Ergot has, within a few years past, become very popular in the treatment of many diseases for which it was not formerly used or recommended in the books, and various experimenters now are claiming for it virtues of a high order as the result of recent discoveries. That it is a valuable agent in some, if not in all, of these new applications of it, I have no doubt. I am

confident that I have used it with great benefit in hæmorrhage of the lungs; in fact, there is no one remedy upon which I place as great reliance in the treatment of this character of lesion.

At our clinical meeting last fall, the summer disease of teething children being up for discussion, I was very much astonished that some of the very prominent members of this Association took the position that medicine promised but little, if anything at all, in ameliorating the condition of this large class of annual sufferers. To such gentlemen I would say, try ergot. I have used it repeatedly, as I think, with great advantage in this tedious and distressing malady. I think it is specially applicable to that stage of the disease in which we have large, frequent, colorless, serous discharges, indicating great relaxation of the mucous membrane of the bowel and the blood vessels distributed to it. I believe it is generally conceded that ergot acts as an equalizer of the circulation by causing contraction of the capillary vessels. How it does this, or why, I do not propose at this time to discuss; but I accept the theory, as it is the most plausible one that has been advanced, and with this theory adopted, it is easy for gentlemen to see its applicability to this serous waste of which we have been speaking.

I have, in two or three cases in my practice, in the treatment of enuresis of children—those that habitually wet the bed at night—found greater benefit from the use of the fluid extract of ergot than from any, or even all, other remedies that I have used. I suppose there are few of you that have not had cases of this kind to treat, and if so, unless you have been more fortunate than I have been, you have suffered no little perplexity and even mortification because of failure to relieve your patients of such a disgusting affection. Two little girls for whom I prescribed it, one in the latter part of the summer, and the other some time last fall, have been up to this time entirely relieved.

By consulting the "Half-Yearly Compendium of Medical Science," you will find that in the hands of Dr. Daniel F. Collins, of New York, almost a miracle resulted from its use in a case of polypus of the uterus. Previous to its administra-

tion, the Doctor found it impossible to circumscribe the tumor with his finger, on account of the shortness and breadth of the pedicle; but after strong uterine contractions had been excited for twenty-four hours by the use of ergot, it was an easy matter to draw the tumor down and twist it, and the next day he removed it almost without the loss of blood.

Some of you may not have noticed that Dr. W. H. Byford, of Chicago, Illinois, chairman of the Obstetrical Section, American Medical Association, proceedings of last year, strongly recommends the use of ergot in the treatment of fibrous and other tumors of the womb. But as I promised to give you mainly my own experience with it, I must omit what others have said. I will add, however, as it may be of practical advantage to some one, that a Russian physician, with a name that I will not undertake to spell, much less pronounce, has discovered it to possess powerful anti-galactagogue properties, and hence has employed it successfully as a remedy in threatened abscess of the mammary gland.

Thus we find that the field of usefulness for ergot seems to be widening and extending, and if we shall find the theory of its action on the capillary system is sustained and demonstrated by future observations, it would be hard to predict a limit for its applicability to the diseases of mankind. It was recently remarked by Dr. James McIntosh, of South Carolina, and I think truthfully: "We seem to be standing upon the threshhold of the usefulness of this remedy."

I propose now to speak of it for a few minutes in an entirely new rôle, or at least I should say if others have recommended it for the purpose for which I am going to propose it to you, it has escaped my observation. I use it and propose it to you as a valuable anti-inflammatory addition to our list of remedies in the treatment of all the chronic inflammations of the womb and its appendages.

It is agreed that in its effects it has a special tendency to the womb. It is also agreed that it controls hæmorrhages, especially those of the womb, by diminishing the calibre of the arteries and arterioles, by contracting the muscular fibres of the womb, and thus the supply of blood is diminished. Now, I ask,

if it can thus contract the blood vessels and arrest active bleeding, will it not also contract them and diminish their contents in passive or chronic inflammations of the same organ, and by this means may we not withdraw, to a very material extent, the fuel that has been supplying the fire or inflammation we are trying to subdue?

How is it beneficial in the treatment of tumors of the womb, even the solid fibrous, as numerous writers, such as Byford, Hildebrandt, Kealing, Atthill, etc., assure us it is? It can only be by cutting off the amount of blood necessary for the life and growth of these abnormal developments. Then, if it has the power to strangulate these very grave diseases, hitherto regarded as beyond the reach of medicine or surgery, why not, exerting the same power over the contractile tissues and thus diminishing the quantity of blood, much more easily relieve a simple inflammation of the womb? An excess of blood is as necessary for the establishment and continuance of inflammatory action as it is for the growth and development of a tumor. So much for theory.

Does ergot, in fact, exert any beneficial influence in the treatment of chronic uterine inflammations? Any one man's experience, however extensive, would be insufficient in most cases to establish a rule in medicine, and mine has been so limited on this subject that it is of very little value in a general view of the subject; but I will state that I first began to use it for this purpose some time last spring, now nearly a year ago. I was treating a case of chronic inflammation of the os and cervix, and to arrest the uterine hæmorrhage, I gave fluid extract of ergot, ℥ss., three or four times daily. This hæmorrhage had continued without cessation for five or six weeks previous to my connection with the case, and when it ceased, as it did after some days' treatment, she was left almost lifeless and bloodless. Fearing a return of the bleeding, I continued the ergot for two or three weeks as a preventive, and during this time I thought the inflammation of the os and cervix improved more rapidly than usual. At length, no longer fearing the return of hæmorrhage (she having passed in the meantime a menstrual period with no unfavorable symptoms), the ergot was

suspended, and then for six or seven weeks I noticed that the local disease did not improve as formerly. These observations first led me to think of ergot as an anti-inflammatory remedy in uterine cases.

I have since used it, as I think, with good effect in all the cases I have treated. I do not propose it as a specific, nor for it to supersede the use of any other well-tried, meritorious remedy; but I propose to give it a fair trial in connection with other treatment and note the result. I give it in doses insufficient to produce violent contractions; but in small doses, say ℥ss. of the fluid extract three times a day. This I think is sufficient in a majority of cases to brace up the enfeebled and relaxed tissues of the womb sufficiently to diminish the superfluous quantity of blood necessary for the support of the inflammatory process.

Several preparations of ergot are now in use; among them will be found the solid extract and the alkaloids, discovered by Wenzell—viz., ecbolina and ergotin—but in my own practice I have always used the fluid extract. My manner of administration has always been by the mouth, though in some cases, especially in the treatment of tumors, and possibly in all cases, its action might be much more efficient given by hypodermic injection. Hildebrandt administered it in this way in one thousand cases, and never saw an abscess follow his own operation. He always injected very deep into the cellular tissue. It is said most patients object to this mode of administration on account of the unusual pain caused by the irritating character of the ergot coming in contact with the skin. A common preparation for hypodermic use is Squibb's solid extract, given in a solution of water of such strength that one m. shall represent six grains of powdered ergot. It may also be given by vagina and by rectum.

ART. II.—*Report of Cases.* By ALFRED VOORHIES, M. D., of Memphis. Read before the Memphis Clinical Society.

Mr. President and Gentlemen,—Permit me to state, in presenting this report of cases, that I am induced to do so chiefly from the fact that the majority of these cases were either

brought to my office or referred to my professional care by some member of this Society; therefore I take this occasion to report the results, knowing each to be interested in the cases thus referred to.

CASE I.—*Subacute Aural Catarrh of several years' duration—Deafness unfits the Patient for the performance of his duties.*—November 16th, Rev. Mr. D., Charleston, Miss., was brought to me by my friend, Mr. Rogers, of the Southern Farmer. While discharging the duties of a country clergyman, he contracted a severe catarrh, with cough and general impairment of health.

He has been under the treatment of several practitioners without any benefit to his ears, yet his general health improved under the use of extract of nux vomica and iron, but he is so deaf as to interfere with his studies.

Symptoms.—The left ear has a feeling of fullness, with the most agonizing noises, bells, escaping steam, hammering, and so on; watch only heard when brought in contact with the ear; meatus slightly injected and a little swollen; membrana tympani congested along handle of malleus; light spot not to be seen; Eustachian tube contained mucus; some pharyngeal catarrh. Right, same objective symptoms, but hearing distance one inch.

Employed Politzer's method of inflation, with some relief to the fullness in the head. Internal treatment, a mixture containing hydrochlorate aq. ammonia, ten grains three times a day.

Had the air douche employed every third day for two weeks, when hearing distance had increased to ten inches. As there was a nasal tone, with enlarged glands, Thudicum's nasal speculum was applied, and powdered alum was blown up the nostrils; the throat was penciled with glycerin and iodine; also gargled with alum and borax.

CASE II.—*Fibro Gelatinous Polypus; Otorrhœa; Removal; Recovery.*—November 10th, 1875, S. E., of Bardstown, Ky., aged seventeen years; clerk of court; pale, much reduced in flesh, with almost constant cough. He had suffered from the age of ten years from deafness, and more or less discharge, fol-

lowing a severe cold in the head; but within the last year has been unable to hear ordinary conversation at all; the odor of the discharge being so offensive as to interfere with his business; even when sitting at rest the discharge was so profuse as to pass under his chin and run down his neck. On examination a polypus was found in each ear, with attachment at the bottom of meatus adjoining membrana tympani. The use of Politzer's method showed perforations of membranes to exist. I employed Wilde's snare, which is the best instrument for the removal of this variety of polypus. The patient was seated on an operating-chair, with the sunlight directed well into the ear; the morbid growth was removed from both ears at one sitting, and almost without pain. Bleeding took place, but by syringing the canal with cold water it was checked. A wash of sulph. carb. of zinc was directed twice a day. Perforations healed rapidly, and in two months the patient was discharged. No running, noises no longer troublesome, and hearing almost normal. The father of this young man was greatly opposed to anything being done for him, under the belief that he was consumptive, and could live but a short while. He gained twenty-four pounds in the first two months after the operation, and is now quite a stout, rosy young fellow.

Case III.—*Epilepsy the result of Chronic Aural Catarrh.*—March 17, 1871, John Killough, Wittsburg, Ark., aged thirty-two years, was sent by my friends, Drs. Van Patton and Price, with the request that I examine his case, and treat him if there was any hope of doing him good.

History.—While serving in the Confederate States Army in 1862, he contracted a severe cold in the head, which made him deaf in the left ear. He suffered no other inconvenience from this trouble until the spring of 1867, when he was suddenly seized with epilepsy. His general health rapidly failed; he became emaciated, nervous, and alarmingly despondent. The convulsions increased in frequency and severity until March, 1871. On examination, right ear was normal in every particular. Left meatus normal; membrana tympani opaque and concave; large vessels along handle of malleus; Eustachian tubes partially closed from mucus in pharyngeal opening; some catarrh;

could not hear watch at all. Politzer's method was employed with some relief to fullness in head, and the hearing was raised to one inch. Vapor of muriate ammonia was forced into the middle ear at intervals of three days for three weeks. This was followed for three weeks longer by solution of sulph. carb. zinc thrown into the cavity of tympanum by means of a catheter.

May 1st—Hearing distance normal; no noises; general health greatly improved; cheerful and no symptoms of epilepsy. He called to see me on the 10th of July, more than four years after this treatment. I found him cured of both deafness and epilepsy, healthy, and a prosperous merchant. This is one of the few cases of epilepsy reported which was undoubtedly the result of an irritation in the cavity of tympanum. Köppe and Schwartz report a case of epilepsy caused by retained pus in the middle ear, which was relieved by perforations of the mastoid.

Case IV.—*Congenital Cataract in a Girl Sixteen Years Old—Recovery of Sight.*—May 20, 1874, Dr. M., French Camp, Miss., brought his grand-daughter, Miss Emily F., to consult me in regard to blindness from cataract, stating that she had been blind from birth. On examination, it was discovered to be the capsular form of cataract. I advised division of the cataract, as is suggested especially by Soelberg Wells, but now practiced by almost all specialists. The object of the operation of division is to lacerate the anterior capsule with a fine needle, so as slightly to break up the surface of the lens and to permit the aqueous humor to come in contact with the lens substance, which, imbibing the fluid, softens and becomes gradually absorbed. The time required for the operation varies with the age of the patient and the consistence of the cataract. In this case absorption went on gradually, so at the end of two months the patient was enabled to find her way to any portion of the city, and even to do shopping without any one to accompany her.

Three weeks ago she presented herself at my office again, eighteen months having elapsed since the operation, saying that she had not improved any in sight for some months, and

that glasses were of no assistance to her. On examination I found the posterior portion of capsules still adherent to hyaloid with no disposition to become detached. I explained to her the state of her eyes, and assured her that I could still improve her sight by another operation. To this she replied, "Do as you like, for sight is all that I crave in this world."

January 24th, assisted by my friends, Drs. Mitchell and Ess, I made a small opening well up in the cornea, and by means of the angular iris forceps extracted the membrane at the first effort. She was put to bed, a simple bandage having been applied, and quiet enjoined for four days; when the wound was found to be entirely healed, the eye free from irritation, pupil clear, and vision much improved; so in one week's time she could distinctly see the type of the "Appeal," yet did not know a single letter. The right eye will be treated in the same way in a few weeks.

CASE V.—*Artificial Pupil.*—Esquire H. C. Brewer, Shelby Depot, consulted me February 1, 1875, in regard to his eyes. Left eye was hopelessly gone from suppuration of globe, which had taken place some years ago, this being the sequel of chronic granular ophthalmia. The right eye had suffered from trouble, with a perforating ulcer of upper half of cornea, which had healed with antero-synechia of the entire upper half of iris. The pupil was involved in the protrusion at the time of perforation, thus producing positive occlusion.

The eye was very red from chronic irritation, kept up by adhesions of the iris. He was advised that the only hope for relief, both to sight and pain, was in an artificial pupil, which he readily consented to.

The operation was made at once by removing a circular piece from the lower segment of the iris; no reäction whatever followed. The dressing, which consisted of a simple compress bandage, was removed on the fifth day, and the only protection then offered was smoked glasses.

In four weeks he was enabled to go where he pleased without a guide, and in two months' time was enabled to discharge the duties of a magistrate, to which office he had been elected. For three years he was led and fed by a devoted wife.

CASE VI.—*Extraction of Cataract—Patient Seventy-two Years of Age.*—Mr. Dickinson, Milan, Tenn., was brought to me by his son, Dr. B. F. D., November 12, 1875, with hard cataract in each eye; opacity complete in right, with only sufficient vision in left to enable him to stumble about the room. His general health was splendid, so I did not hesitate to advise extraction of the cataract from right eye.

On the 13th, his seventy-second anniversary, with the kind assistance of my friend, Dr. R. B. Maury, I operated on his right eye, following closely the "peripheric linear" method, as given by von Græfe. He was placed in bed, there to remain for one week, with the simplest compress bandage over both eyes. On the sixth day symptoms of iritis were discovered, being the usual characteristics of scalding water, redness and some pain. The bandage was removed and a two-grain solution of sulph. atropia dropped in the eye every two hours, until the pupil was much dilated. This remedy, with an occasional dose of sulph. morph., was employed for two weeks, when everything again moved on smoothly. In four weeks from the time of operation he was enabled to go home, seeing well enough to read large signs as he passed to the depot. As to the ultimate result, I will give his own words, as received in a letter a few days ago.

MILAN, TENN., January 25, 1876.

Dr. A. Voorhies: Dear Sir,—I now, for the first time, attempt to write, and I feel bound to write you my first letter. I believe I have nearly forgotten how to write; having been blind nearly two years, I am out of practice. We got home all right, and I have improved all the time, and can see. I am using the glasses that I wore home. I can see very well at a distance, not so well near by; I can see a building at the distance of a mile, the windows, columns, etc., as plain as I ever could, and can see well enough for ordinary purposes. With the other glass, I can see the smallest print with ease. I need not try to express my thanks for the great benefit received. I thank kind Providence for directing me to you. My best wishes for your prosperity and happiness.

Your obedient servant,

W. D. DICKINSON.

ART. III.—*Two Cases of Asthma.* By ALBERT C. LOVE, M. D., Artesia, Miss.

The efficacy of calomel administered sedatively in croup should no longer be questioned. Physicians who have not had opportunities of testing its value have doubtless found convincing evidence of it in the current medical literature of the times. It was partly from a knowledge of its action in this disease, and partly from the reading of an article, entitled "Cases Illustrating the Direct Action of Remedies on the Nervous System," by Dr. Frederic D. Lente, published in No. 5, vol. xix., of the "Richmond and Louisville Medical Journal," that led to its use as a remedy in the following cases:

CASE I.—E. is a negress, aged thirty years. Her right arm was amputated in early life, unfitting her for manual labor on the farm, and leading to the formation of sedentary habits. She married in her nineteenth year, and has borne no children. There has been great irregularity in her catamenia for some years. She has, at intervals, been troubled with asthma. On my arrival, at 9 P. M., from questioning her, it was ascertained that about a week previous she had, from exposure, contracted simple bronchitis, and that during the last three days and nights continued paroxysms of asthma had caused great unrest and entirely prevented sleep. She was in the sitting posture; breathed with great difficulty; declared it impossible to remain in a recumbent position. With the exception of a dose of castor oil at the beginning of the attack, she had taken no medicine. She was given twenty-five grains of calomel, to be followed by Epsom salts next morning.

CASE II.—Later on the same evening I was called to see L., a negress, thirty-five years of age, of full habit, strong, and robust. She married in early life, and is now the mother of a number of children. She has been subject to no uterine affection. Her duties have required her presence indoors, and her habits are decidedly sedentary. Her asthmatic trouble was preceded several days by a mild bronchitis. She experienced little inconvenience from paroxysms, save at night, and then they were not of an alarming character or of such gravity as

to render sleep and rest unattainable. The prescription was twenty grains of calomel, to be followed next morning by Epsom salts.

Both patients were visited on the next day and found engaged in the performance of their domestic duties. Both informed me that the medicine operated well and in a short time after my departure, causing instant relief and insuring a night of undisturbed rest. The bronchitic trouble still remained. Syrup of squills and syrup of senega were prescribed to be taken as expectorants, and the cases were dismissed. Both patients recovered without a return of asthmatic paroxysms.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—*The Transmission of Syphilis.* By M. KASSOWITZ, M. D., Vienna.

This monograph is certainly one of the most praiseworthy clinical studies which has appeared for several years. The great interest of the question under discussion is generally conceded, and it is a matter for congratulation, that in this brochure the author has approached it without bias, has been supported by sufficient facts, and that he has therefrom drawn conclusions warranted by them. It is strange, still it is nevertheless true, that the majority of articles treating of the hereditary transmission of syphilis have been written in support of the now so-called Cullerier theory, that the father is powerless to transmit syphilis to the offspring, and that this accident could never occur except when the mother herself was syphilitic; in short, that the mother alone is capable of transmitting syphilis to the child. There were several reasons incident to the question which tended to the quite extensive acceptance of this doctrine; but it is very probable that its positiveness of statement, unqualified by any modifications, did much to cause it to be so generally received. The want of a proper field for study

has also been a serious drawback to the solution of this important question. Kassowitz, however, as he states in his introduction, has had an abundant field and large opportunities, and he certainly has made good use of them. In addition to his own rich material, he presents to us the cases and views of others, whose opinions he subjects to a searching analysis. He first considers quite fully the present state of opinion upon the question as to the relative part taken by the mother and father in the transmission of syphilis to the child; that is, whether a healthy woman can bring into the world a syphilitic child, the father being syphilitic; or whether, the father being healthy, a syphilitic mother can bear a healthy child. He briefly but tersely considers the various causes which have led towards different opinions, and concludes that various facts have been confounded together, such as infection of the semen and of the ovum with placental infection; and he thinks further, also, that observations have been made in a narrow, one-sided manner; as for instance, syphilographers deny the immunity of the mother for the reason that they, being specialists, are generally consulted by syphilitics; and, on the other hand, the physicians for children's diseases, seeing syphilitic children brought by healthy and blooming mothers, conclude that the latter possesses an immunity. The author then considers the theory of transmission in general and its relation to the inheritance of syphilis. The ovum of the female being fructified by the semen of the male, a new being is formed which partakes of the character of the two parental organisms. He thinks that even as physiological peculiarities may remain latent and not be perceptible for years, so also may pathological peculiarities, such as malformations, phthisis, cancer, etc. Many facts prove that such inheritance occurs from both parents. The influence of the father only extends to the period of impregnation, while that of the mother is continued until birth. This suggests the question, can a mother, through the utero-fœtal and later placental circulation, transmit to the newly-developed individual any of those qualities which it receives at the time of fertilization of the ovum? Can she transmit to it any corporeal or physiological power, or the capacity for the development of

such? Kassowitz says that no facts bear out these suppositions, but that by means of a healthy nutritive material she may invigorate the characteristics conveyed at impregnation or interfere with their progress by insufficient nourishment. He thinks that such diseases as the exanthemata may be conveyed from the mother to the fœtus; therefore disease reaches the unborn child by the fertilization of the ovum, or by direct inheritance, or by the passage of the poison through the utero-placental circulation or intra-uterine infection. Kassowitz thinks that it is very improbable that two processes so different can produce similar results, and to put the matter in a more forcible way, he formulates the two following questions: 1. Can a non-syphilitic mother bear a syphilitic child? 2. Does syphilis acquired by the mother during the course of pregnancy affect the offspring which at conception was healthy? He is positive that healthy women can bear syphilitic children, and to prove the point adduces strong evidence, not only in numerous cases reported by others, but also by the statistics, taken with great care, of the Vienna Foundling Hospital. These contain records of four hundred cases of hereditary syphilitic children, of whose mothers one hundred and sixty-six were found to be healthy; one hundred and twenty-two were syphilitic, while the rest were of doubtful conditions. These women were examined with the greatest care, and were under observation for years; moreover, when regarded as healthy, they were not subjected to treatment. This removes, it will be seen, a powerful objection. Certainly these facts are worthy of consideration. Kassowitz shows the weak side of the arguments of Cullerier and others by quoting their cases, which are mainly those of syphilitic men who marry and whose wives bear healthy children. He makes the very strong point against them that they do not say anything as to the treatment and the extent to which it has been carried in these cases, and it is well known that by a mercurial course the transmissive power of syphilis may be destroyed or temporarily held in check. He further shows that the cases of these observers are so meagrely reported, and so lacking in very essential points, that they are not worthy of consideration in forming conclusions in such an important and delicate question.

He then considers the second question, Can the mother of a child, syphilitic from its father, remain healthy? Before answering the question he discusses the belief of many observers, that it is possible for a mother to be infected by her syphilitic child. It is thought that this occurs in three principal ways:

1. The infection of the healthy mother through the placental circulation from the fœtus diseased from its father.

2. The infection of the mother at the time of conception by syphilitic semen.

3. The infection of the mother by the semen of a man in whom syphilis is latent and who is free from infecting lesions, independently of conception or fertilization.

Kassowitz denies each of these modes of infection. He thinks that the theory of infection by the ovum, the *choc en retour* of Ricord, which was once advanced by Hutchinson, is based on cases badly observed and defective in essentially important details. According to this view, this mode of infection is a slow poisoning of the system by successive pregnancies, while facts prove that the infection of the system by syphilis is always at first severe, and it then tends to wane until it finally dies out. It will be seen that this course is at variance with what is claimed to occur in the *choc en retour*. Kassowitz then shows that in point of time the evidences of syphilis in the mother often point to infection from without rather than from the fœtus; as, for instance, when the manifestations appear shortly after conception, when the disease in the child is not recognized, and certainly if present is not in a state so advanced as to warrant the assumption that the syphilis of the mother is derived from it. Then again, after several pregnancies a mother gave evidence of tertiary lesions, or of a cachexia, and it is assumed that she was rendered syphilitic by her children. The author thinks that these cases are either insufficiently observed or their nature is misunderstood. The tertiary lesions may follow secondaries which have passed unobserved and were due to contagion from without, and the cachexia may be of simple origin and not due to syphilis. Kassowitz acknowledges the force of Colles' observation that mothers have never been known to be infected by their own children, and offers nothing new in expla-

nation. As to the second mode of infection, which was first advocated by Bärensprung, that the semen of a syphilitic man was harmless until fertilization occurred and then syphilis would result. Kassowitz shows the weakness of the argument and the cases quoted in support of it, and thinks that the infection is of the ordinary kind by means of a sore on the genitals.

This brings him to the question whether syphilis acquired during the term of pregnancy can be conveyed to a fœtus healthy at conception. He thinks that this view is rather more tacitly accepted than arrived at by careful observation. He brings forward the damaging fact that this does not always occur, whereas, if this supposition were correct, infection would not be of exceptional occurrence. The exact time at which this infection is possible is in doubt, but some authors specify certain months in which the child escapes. The fact of the case is simple—namely, that syphilitic mothers can bear healthy children. In order to establish this mode of transmission, Kassowitz thinks that the following conditions are necessary: 1st. That the health of the father at the time of the conception is proved. 2d. That the health of the mother at the time of conception is also proved, and the exact time of her subsequent infection be accurately determinable. The infecting ulcer or some of the early lesions should have been seen by the observers. 3d. The syphilis of the child must be proved beyond a doubt. The fact that children are prematurely born, still-born, or sickly, without previous outbreak of syphilitic lesions, should not be taken as a proof of syphilis. If all these facts are not fully brought forward, cases are not worthy of consideration, and Kassowitz shows that there is not a recorded instance which will bear this thorough analysis; therefore he rejects this theory. He further quotes the fact as occurring in cases of twins, one of which is more profoundly syphilitic than the other, even in some instances one being free, as tending to prove that the mother alone is not the infecting medium. Kassowitz, as a result of his studies, formulates the following conclusions: A child whose parents were healthy at conception will not become syphilitic, even if its mother becomes thus affected during the course of the pregnancy. Such infection may induce abortion, or early

birth, as any severe disease may, but not by transmitting the disease to the fœtus. He also thinks that the syphilitic poison does not pass by the circulation from the mother to the fœtus. The author then considers the nature of the syphilitic poison and its difference from that of the exanthemata. That of syphilis is a fixed contagion and is contained in solid particles, hence must be transmitted with the elements of the organism, whereas that of the acute exanthems is volatile, may be transmitted by the breath; and while that of syphilis, owing to the peculiarities of the placental circulation, can not pass either from mother to fœtus or the reverse, the contagium of the exanthems may reach the fœtus through the fluid parts of the blood. The author thinks that the capability for transmission of syphilis begins at the moment of the appearance of general syphilis, and from that time its power gradually wanes. It may be observed that there are periods of latency in which transmission does not take place; this is due either to the peculiar course of the disease, which has exacerbations, or to the action of a mercurial treatment. Perhaps no more important point occurs in the whole book than that relating to the powerful influence of mercury in preventing the transmission of syphilis. Finally, as to the point of late so extensively considered, whether the father's influence is potent in this transmission, Kassowitz expresses the opinion, based on cases, that he is more frequently the cause of syphilis than the mother is. He gives statistics to prove this point, which it will be seen has a very great practical import. Space will not permit us to consider in detail the chapters on the intensity and duration of the transmissive power of the latency of inherited syphilis, and of its relations to other constitutional diseases. Though very interesting, they contain nothing particularly new or important. It will be seen from this hasty review that the author has considered the subject in all its bearings, and it may be added that he has done his work conscientiously and thoroughly.—R. W. T.—*Boston Medical and Surgical Journal.*

ART. II.—*On the Choice of an Operation for Stricture of the Urethra.* By W. F. TEEVAN, B. A., F. R. C. S., Surgeon to West London and St. Peter's Hospitals.

If an operation be required for a stricture, which is the best one to perform? The answer to this question has interested and disturbed the minds of surgeons for ages; and in this, as in other matters, fashion has to a certain extent influenced practice, so that not only have different countries at one and the same time exhibited great diversity of procedure, but in each country the most opposite opinions and practices have been contemporaneous. It is my intention to confine my inquiry to those operations practiced on strictures previous to instruments. All such operations may be arranged under one or other of the following heads: 1. *Incision*, which includes internal, external, and subcutaneous urethrotomy; 2. *Laceration*, which embraces "dilatation *forcee*," the so-called "immediate treatment," splitting, rupture, divulsion, and over-distension when carried beyond the stage of true dilatation. Much confusion has been caused in England by the looseness with which the term "dilate" has been used. When an English surgeon talks of "dilating," the process he refers to is really, usually, one of laceration. For instance, when he dilates the prostate in the operation of lithotomy, he tears that organ; and so when he says he has, by sudden dilatation, enlarged a strictured urethra, he has lacerated the canal. French and American surgeons have clearer ideas as to what the so-called dilatation really is, and the former have remarked that the pseudo-process of dilatation ought to be named "divulsion"; and the latter have pointed out that the instrument which an English surgeon calls a "dilator" ought to be christened "lacerator," and the action effected by the machine "laceration," and not "dilatation."

The standards by which the relative merits of the two methods can be judged are pathology, surgery and the statistics of the operations themselves. Before proceeding, the ground will be greatly cleared, and an answer to the question rendered more accurate, by inquiring what it is that we really require when we are about to undertake an operation for the relief of a passable stricture. If reference be made to the diagram of a

strictured urethra represented at Fig 13, it will be observed that the canal has been so altered by disease at one spot that it is contracted and shrivelled; the state is one of atrophy (Mercier), and not hypertrophy, as thought by some. Now, what we require is to enlarge the diameter of the urethra, where narrowed, so that it shall be of a calibre equal to or at all events not much less than that of the healthy part. But how is this increase to be effected? Much in the same way that a tailor enlarges the girth of a pair of breeches. If he discover that there is no spare material to let out, he makes a cut and inserts a new piece of stuff, as much like that of which the breeches are made as he can find. When the urethra is wasted and narrowed, it can not be enlarged to its natural calibre by letting out a piece of redundant tissue, for there is none to spare, and we must therefore insert a piece. Where is it to come from? If the stricture be completely cut or torn through, and the edges of the wound kept apart, nature will fill up the gap with a piece of new tissue. The French and American surgeons have very clear ideas as to the requirements an operation must fulfill; the former have named the piece wanted the "pièce d' allongement," and the latter have happily and aptly christened it the "cicatricial splice"(*). Hence we require a splice which shall, as much as possible, resemble the normal tissue. The cicatricial splice may be made in one of two ways—by cutting or laceration. Pathology teaches us that all cicatrices tend to contract in varying degrees, those which follow burns or lacerations being endowed with a greater degree of contraction than those which result from clean cuts. If a clean cut be made through the stricture, a cicatrix will be obtained, as shown at Fig. 14, oval in shape, and having its axis parallel to that of the urethra. If, on the other hand, the contraction be torn through, there will result an irregular cicatrix, stretching in some cases across the urethra, and not having its axis parallel to that of the urethra (see Fig. 15). Inasmuch, therefore, as the cicatrix in Fig. 15 will be followed by more contraction than the one at Fig. 14, it is then the less desirable of the two.

* Professor Gouley, of New York.

Inquiry into the location of stricture teaches that the complaint affects the floor of the urethra to a greater extent than any other part, being sometimes entirely confined to that situation. The diagrams numbered 1, 4, 7, 10, much exaggerated in size for the sake of clearness, represent sections of the urethra as affected in the floor, roof, or either side. The other sections delineate the strictured urethra—firstly, after it has been cut through; secondly, after it has been torn through—and they show what each operation can achieve in the four separate conditions proposed for trial. It is well known that if an induration be completely divided it will often disappear; hence it is an object to attack a stricture in its stronghold rather than injure the unoffending healthy tissue. Let us take

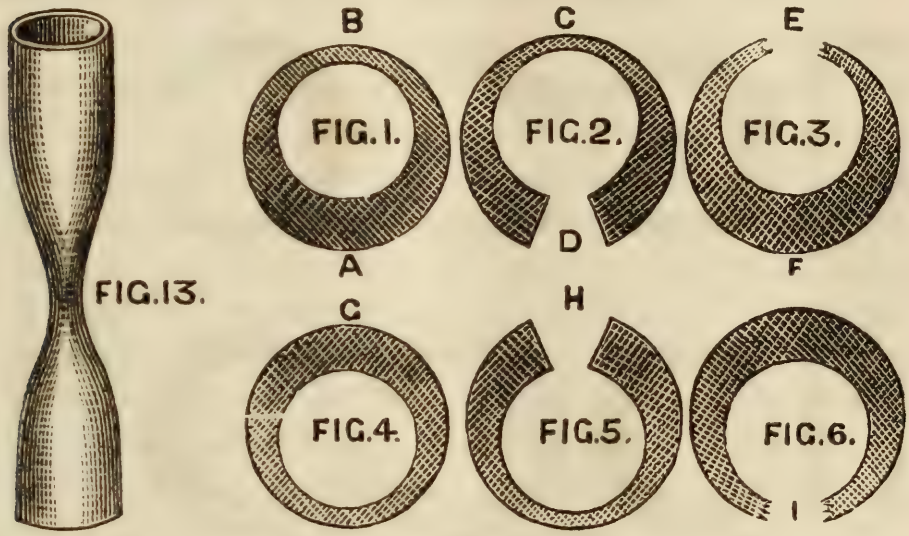
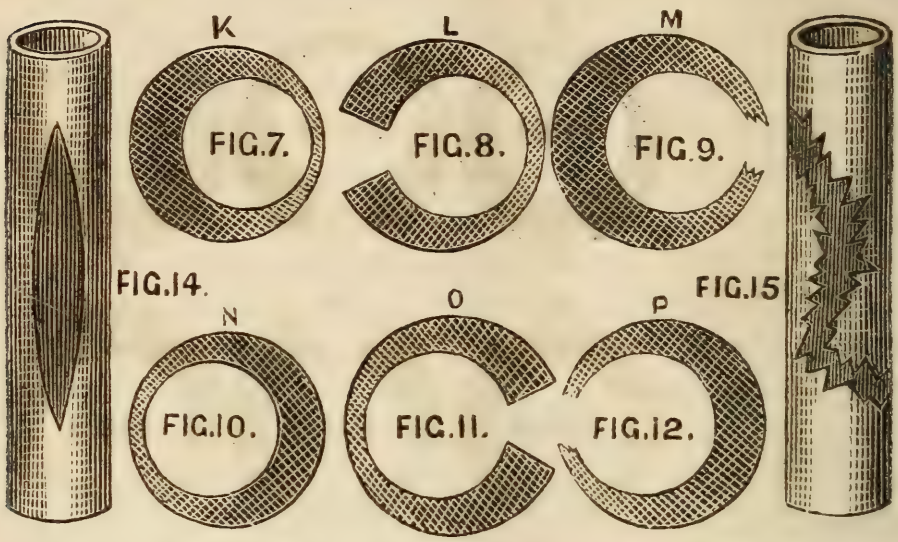


Fig. 1, where the floor is the part affected, and see the results according whether the stricture be cut or torn through. If we cut, we can cut where we like, and consequently the floor can be completely divided, and a wound with cleanly incised edges be produced, as seen at D, Fig. 2, the healthy roof, C, being spared. If the stricture be torn through, we can not control the laceration so as to take the course we wish, for it will follow its own route, and in the case under consideration the urethra will be lacerated, not at the most diseased spot, F, Fig. 3, but it will give way at the roof, E, because it is the healthiest, and therefore the thinnest spot. In Fig. 4 the roof, C, is represented as most affected, and if a knife be used it can be di-

vided at that spot, and a wound made with even edges, as seen at H, Fig. 5; but if a dilator (lacerator) be employed, the urethra will be rent in its most healthy portion, the floor, I, Fig. 6. Supposing the left side of the urethra to be most involved, as viewed at K, Fig. 7, it can be incised at the desired spot, L, Fig. 8; but if laceration be employed, the urethra will give way at its weakest spot, M, Fig. 9. Finally, if the deposit be on the right side, N, Fig. 10, it can be cut where desired, as seen at O, Fig. 11; but if torn, the healthy spot, P, Fig. 12, will give way. There are thus four separate conditions of the disease, any one of which may be met with, in which the knife can attack the diseased spot, whereas the dilator shirks the enemy and tears open the healthy urethra.



It is thus seen that the surgeon who uses the knife knows the situation and length of his incision, whereas he who employs a dilator is entirely ignorant of the site and extent of the laceration. The possession of the above knowledge is of the utmost importance; for if an operation be followed by hæmorrhage, the surgeon, who is aware of the exact source of the bleeding, can adopt efficient measures for its arrest. But it may be said, how is a surgeon to know which portion of the urethra is diseased, and, if he did know, how can he so apply the knife as to divide it By using the "bougie à demiboule," or a very fine instrument made on the principle of Civiale's extractor for urethral calculi, the exact position of the part most affected can

usually be made out, and then divided with a urethrotome which has its knife attached to a corresponding surface. We have now got a step further. We know exactly what we want—"a cicatricial splice,"—and we see that the one we require will best be made by cutting rather than laceration. It will be well now to ascertain whether this exposition is confirmed by experience. It is, as I have stated, a doctrine of pathology that a cicatrix following a laceration is attended by a greater degree of contraction than that resulting from a cut. Now, after an operation for stricture, whether by cutting or laceration, the edges of the wound must be kept well apart by the passage of instruments, and, as a matter of course, there will be contraction inseparable from the healing process; but the great object to be attained is the minimizing of the contraction, and this can be done by selecting that operation whose cicatrix is followed by the least contraction—which will be the cutting one. What has surgery to offer in the way of independent and unbiased evidence regarding the effects of cutting and lacerating the healthy urethra? Lithotomy is a common operation; in it the bulbo-membranous urethra is laid open by a clean cut, and no contraction follows the injury; but if the same healthy urethra had been even partially ruptured by violence, a traumatic stricture would have formed.

I will now proceed to statistics. The cutting operation is of ancient origin, but that of splitting is of recent date, and was invented by Mayor, of Lausanne, he being the first surgeon to split a stricture with a wedge. To such an extent did he push his hobby, that he declared that those patients who preferred any other method to his were "poltrons" (*sic*). Mayor's plan and that of Perrève were extensively tried in Paris, but were abandoned on account of the mortality attached to the operations. Within a recent period the method has been again revived in Paris by Voillemier, but it has not found favor with French surgeons. Now, it may with truth be said that surgeons know but little of the urinary diseases of the male, except what they have learned from the French; for the exceptions are so few as to constitute the rule. Hence the collective opinions of French surgeons are invested with all the authority

of ex cathedrâ judgments. The French surgeons object to the splitting operation, on account of its mortality, and prefer internal urethrotomy as a less dangerous procedure. I know that the operation of internal urethrotomy has been performed upwards of one thousand times with but three deaths; and there would probably have been only two, had it not been for the crowded state of the Necker Hospital during the Commune. No surgeon, that I am aware of, has ever been able to bring forward such favorable statistics on behalf of the splitting operation; indeed, the deaths after that operation have not, with but few exceptions, been published. Thus, therefore, my inquiry goes to show that if an operation be required for a stricture, that operation ought to be a cutting one. At the present time internal urethrotomy is, par excellence, the operation in France. In Germany the splitting operation has never taken root. In America both operations have been largely practiced, but internal urethrotomy is now supplanting the splitting operation. Professor Mastin and Dr. F. Otis have both given up the splitting method, the former because he was dissatisfied with the results, and the latter on account of the deaths that followed the operation; whereas those gentlemen have had upwards of 500 cases of internal urethrotomy without a death. In Great Britain the splitting operation was largely practiced some time ago; but it has lately been abandoned by a large number of hospital surgeons.—*Med. Times and Gaz.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—*Purulent Ophthalmia of Infants.* By RICHARD C. BRANDEIS, A. M., M. D., Louisville, Ky. [Read by request before the Central Kentucky Medical Association, Harrodsburg, Ky., July 19th, 1876.

Purulent ophthalmia of the newly-born, or as it is technically termed, *ophthalmia neonatorum*, is a disease so very destructive when it is allowed to run its course uncontrolled, and more so when it is improperly treated, and still so very amenable to

proper measures, that I need hardly apologize for again bringing it to the notice of the Profession. Among the poorer and more ignorant classes, it is the most common cause of blindness in childhood. Our blind asylums bear evidence of the frequency of its occurrence, and the great loss which accrues to the State, not only by the direct tax imposed in consequence of the cost of maintaining these unfortunates, but the indirect loss incurred by the withdrawal of so many workers who might contribute to the productiveness and industry of the nation. The mothers of infants attacked by this disease have so commonly, at the time of their confinement, a puriform discharge from the vagina, that it is more than probable that the ophthalmia is often due to the direct inoculation of the child's eye with the discharges of the vaginal passages. It is not necessary, however, that there be gonorrhœa; on the contrary, it is often certain that the vaginal discharge was not the result of impure sexual intercourse; the products of a simple leucorrhœa transferred to the ocular conjunctiva will often give rise to an acute suppurative ophthalmia. Very often, however, want of cleanliness on the part of the nurse, carelessness in washing the infant after birth, unfavorable hygienic surroundings, and rapid changes in temperature, will of themselves be sufficient causes to produce this disease. The condition of the child itself will often suffice to account for the trouble; for in a puny, scrofulous or rachitic infant, the cornea offers less resistance to external assaults, and sloughs will be more apt to occur than in children of a robust and healthy nature.

When the disease is contracted, we usually notice on the second day after birth that the infant's eyelids are slightly swollen, the ocular conjunctiva is somewhat reddened, and if the lower lid is drawn down so as to expose the conjunctival surface, it will also be found unduly red, and a flake or two of mucus will be seen on the loose folds of the membrane at the junction between it and the eyeball. On the next day the conjunctiva will be more inflamed and slightly œdematous, and there will be an abundance of muco-purulent discharge; the swelling and redness of the eyelids will also be greater. The day following the dropsy of the conjunctiva or the chemosis will

be so great that the distended membrane will overlap the margin of the cornea, and may bulge between the distended eyelids. The discharge by this time has assumed a truly purulent character. The child suffers greatly, is fretful and uneasy, and can not sleep. If the intensity of the inflammation does not abate, the cornea loses its normal lustre, the epithelium is thrown off, the lamellæ become whitish-gray and opaque; it then sloughs and ruptures, which allows the aqueous humor to discharge, and the iris often protrudes from between the lips of the perforation of the cornea. In consequence of this vacuüm in the anterior chamber, the lens, which is pressed upon from behind, is pushed forward until it comes in apposition with the posterior surface of the cornea.

If the rupture of the cornea be not very extensive and the hernia of the iris is not very large, the eye may yet be saved. When the exposed portion of the iris inflames, it becomes thickened and coated with lymph, granulations appear, and the hernia shrinks, and we have a cicatrix in which the iris is entangled. This need not interfere with vision, unless it is in the region of the pupil. Small scars often disappear almost altogether, partly by the assimilation of the cicatricial tissue to the normal structure of the cornea and partly by the absorption of the exudation thrown out during the inflammatory process which gave rise to the destruction of the cornea.

When, however, the corneal rupture is considerable and a large part of it sloughs away, the lens, as well as some of the vitreous humor, is often instantaneously ejected, which is followed by a collapse of the globe. Where this has occurred, the cicatrix which occupies the seat of the destroyed cornea is apt to protrude, and unless it is quite dense and thicker than the cornea was, it may rupture from time to time and give vent to the fluid contents which have accumulated in the bulb. Occasionally this will not occur, but the globe will atrophy and become quite hard. Very often, however, when only one eye is lost, severe neuralgic pains will be felt in the stump and the surrounding parts, which will generally produce a similar trouble in its fellow, and may give rise to sympathetic ophthalmia with consecutive loss of sight. Then, if not before, it becomes

necessary to enucleate the useless member so as to secure the integrity of the other eye. The prognosis of this disease depends on the severity of the attack, the surroundings, the time at which medical aid was summoned, and last but not least, on the method of treatment employed.

I fully endorse the assertion made by Dr. S. C. Ayres, of Cincinnati, in his excellent article on Ophthalmia Neonatorum, when he says "that less judgment is used in its management than in that of any other disease to which infants are liable." In order to support himself in this assertion, Dr. Ayres has compiled two tables of one hundred cases each, which have been treated by him. The first series in private practice, the second attended in hospital. In the former cases, where there were inexperienced nurses and where the instructions of the physician were not always implicitly obeyed, there were only fifty-eight cases in which the eyes were free from any corneal complication, while in the remaining forty-two cases the integrity of the eye was more or less impaired. Of these forty-two there were six cases in which the children were hopelessly blind in both eyes, and in five cases in one eye, from ulceration and destruction of the corneal membrane.

On the other hand, the Doctor presents the statistics of his cases in hospital practice, and "in not a single one did any corneal complication arise, and all recovered with good vision."

The excellent results attained were due in a great measure to the fact that officious friends and incompetent nurses did not have charge of the affected infants, but medical aid was at hand as soon as the first inflammatory symptoms made their appearance. Another factor was the scrupulous cleanliness observed in hospital practice, which contrasts favorably with the neglect and dirt so often encountered in practice among the lower and more ignorant classes.

Although I have failed to keep an exact record of my cases, I find that there was no corneal blemish in any one instance in which I had charge of the patient from the earliest inception of the disease, and even in those in which I was consulted after the second or third day, I generally succeeded in preventing any impairment of the transparent media. This, however, was

mainly due to the stress which I generally lay upon the observance of the most rigid, cleanliness, although the medical treatment employed also contributed its fair share to the successful issue of the case.

The disease generally makes its appearance before the seventh day after birth, and the first symptoms will be more frequently noticed on the second or third day. Such cases of ophthalmia seen in children after the second or third week, or later, can hardly be considered as due to inoculation, but are rather to be considered as acute conjunctival catarrhs, dependent upon atmospheric influences. These also progress with great rapidity and violence, and ought to be attended to without delay.

The frequency of the disease varies considerably, as stated by different authors. Dr. S. C. Ayres, in his article, states that from March 2, 1871, to March 11, 1875, there were born in the Cincinnati Hospital 726 children. Of these 100 had had ophthalmia neonatorum, or 13.77 per cent. Dr. Henry Power, of London, states that he found 76 cases in a total of 7,200 cases treated in hospital, or rather more than one per cent. Dr. Heyman, in his report of cases treated in his institution at Dresden, says: That of a total of 1,855 cases attended, no less than 139 cases of ophthalmia neonatorum occurred, or nearly 7 per cent. In the third annual report of the New York Ophthalmic and Aural Institute, under the charge of Prof. Knapp, I find that in a total of 2,526 eye cases treated in the year 1872, there were 684 of conjunctival trouble, of which 24 were ophthalmia neonatorum.

The seasons seem to have but little influence on the prevalence of the disease; for according to Dr. Ayres there were 14 cases in June, 13 in January, 12 in July, and 5 in both February and November.

As far as the treatment goes, the statements already made will permit you to infer that if the case is seen sufficiently early, no eye ought ever to be lost.

The first and most essential part of the treatment consists in perfect cleanliness and the timely removal of all the discharges from the eye as soon as they are formed. This can easily be

carried out by the nurse if she be capable and willing. She should be given an ordinary male urethral syringe which works well, and be directed to send a gentle uniform stream of cold water, at first every half hour, and later, every hour upon the eyes of the child, care being taken that all the coägulation deposited upon the edges of the eyelids are removed, and that the stream of water gains entrance to the eyeball itself, the eyelids being separated for the purpose. This, however, should only be done if there be a trained nurse, or else the eye might be injured by the nozzle of the syringe. I then substitute for that instrument the use of small pieces of old linen dipped in cold water, and have the eyelids and palpebral fissure thoroughly wiped off every half hour.

It is well to insist upon the immediate destruction of every piece of lint thus used, and in this way prevent the further employment of the same and the spread of the infectious matter. It is also well to remind the attendants that the bowls and dishes used should be thoroughly cleansed from time to time; they must also be apprised of the paramount importance of protecting their own eyes from the discharges of the infants'. I also order a two-grain solution of nitrate of silver to the ounce of water, one or two drops of which are to be instilled into the eye three times a day. Once a day, however, this cleaning of the eye should be performed in person by the attending physician, after which the lids are to be everted and a ten-grain solution freely applied to the inflamed conjunctiva by means of a large camel's hair-brush. Before doing this the physician should, if possible, carefully examine the eye, in order to satisfy himself whether or no there be any implication of the cornea. In order to remove any of the superfluous nitrate, the eye is thoroughly injected with a solution of salt in water after the application, which will convert the salt into the insoluble chloride of silver. I beg to lay particular stress upon the use of the nitrate of silver, the more so because I am well aware that many, and among them some very respectable authorities, deprecate the use of this salt in this disease. My advocacy of it depends upon the pathological indication. M. Prosoreff in Graefe's Archive for Ophthalmology, volume XI,

part II, page 135, et seq., has especially investigated the origin of the immense quantities of pus in the disease, and has shown that shortly after the introduction of any irritant substance into the eye, the epithelial cells undergo a series of changes, the superficial ones assuming a spherical, the deeper ones an oval form. The nuclei of the cells then divide, and, after a short space, the cell walls and the contents of the cells appear to break down, and the nuclei, which have already begun to possess well-defined nucleoli, are set free, and form the pus corpuscles; all these changes are effected with great rapidity.

The first indication, therefore, is to destroy this proliferating mass of epithelial cells and to destroy its infectious power, and, as has been satisfactorily proven by experiment, there is no chemical agent which can be more safely employed for this purpose than the nitrate of silver.

Von Graefe, vide his Archive, volume I, part I, says: "The condition of the mucous membrane must always be considered. If it is undoubtedly blennorrhœic, the free application of the caustic is plainly indicated, for it is the most rapid and safest remedy that we have, even if there be considerable corneal disturbances. In ophthalmia neonatorum these cauterizations should be freely resorted to, because experience teaches us that generic diphtheritis does not follow, and the mixed forms so take on blennorrhœic action."

Stellwag ("Wiener Med. Wochenschrift," Nov. 22, 23, 1855), favors the same method of treatment, and, like Von Graefe, recommends the employment of the solid stick of nitrate of silver or that of the mitigated stick, which consists of equal parts of the silver and of nitrate of potash. This is applied to the inner surface of the lids, and to the upper and lower cul-de-sacs of the conjunctiva, when it occasions a slight eschar. Here the solution of salt and water should be freely used. Pain and lachrymation follow, the temperature of the lids rises, and in the course of a few hours the eschar becomes detached and soon escapes in the form of flakes and fragments. According to Wecker ("Etudes Ophthalmol.," volume I, page 45, et seq.), "a period of remission then follows, during which the epithelium is undergoing regeneration, but which, after lasting for a vari-

able period, is itself followed by a third period of recrudescence, in which all the primary symptoms are liable to recur, unless a fresh cauterization be made. This should be done after the first eschar has separated, and before the period of recrudescence has attained its greatest intensity." Cold applications after each cauterization are of great service in promoting the contraction of the distended vessels of the mucous membrane. Generally the caustic may be applied every twenty-four hours; in very severe cases every twelve hours, and when the severity of the disease abates, every forty-eight hours and less will answer.

Brudenell Carter, in his recently published book on the diseases of the eye, London, 1875, page 227, says: "Some surgeons use an alum lotion, but I have no confidence in it, and prefer a solution of nitrate of silver of the strength of one or two grains to the ounce." Lawson, on Diseases and Injuries of the Eye, 1869, says, page 20: "If the case is very severe, the surgeon should see the child once or twice a day himself, and having washed the eye thoroughly from all discharge with a stream of cold water, he should drop into it two or three drops of a solution of nitrate of silver, grains ii., ad aquæ ℥i."

In case we find on examination that the cornea presents an opaque, lack lustre appearance and has an ulcerated surface, the use of atropine should not be neglected; for by diminishing the intra-ocular pressure and the tension of the cornea it promotes granulation, and in case there should be a rupture of the cornea it will prevent the entanglement of the iris in the lips of the wound and the consequent formation of staphyloma.

In case there be danger of a perforation of the cornea, it is best to puncture some of the transparent portion of the cornea and thus allow the escape of the aqueous humor. All these painful symptoms immediately disappear after this; and if the ulcer does not change in appearance after a day or two, this tapping should be repeated two or three times. The actual perforation of the cornea should always be prevented, if possible; for if it does rupture the iris is almost surely brought into contact with the edges of the ulcer, thus giving rise to anterior synechiæ and anterior staphyloma, but the lens and its capsule

being pushed forward by the elasticity of the globe and the absence of pressure in front, are also brought in contact with the cornea, and capsulo-lentecular cataract will be the result. In such cases in which a staphylomatous protrusion of the internal elastic lamina of the cornea is already present, it is advised that a fine point of nitrate of silver be applied to it and the residuüm be wiped off by the application of a brush in salt and water. I myself have treated three cases of marked staphylomatous protrusion of the membrane of Descemet by simply using a two-grain solution of sulphate of atropia twice a day and the application of a firm retentive bandage. The mode of applying this bandage is to pack the orbit well with fine lint, care being taken to place the greater part of the lint in and around the inner canthus of the eye, for in this way the possibility of separating the lid is overcome. Then a bandage of old flannel cut across the bias, elliptical in shape and about four inches in its greatest and two inches in its smallest diameter, and having about three feet of tape sewed to either end, is applied to each eye, and the tapes passed forward and backward around the head so as to maintain a steady and equable pressure Not unfrequently, however, will children from two to four years old be brought to you, who have suffered from purulent infantile ophthalmia, and have the cornea replaced by a bulging, white opaque scar, which is termed an anterior staphyloma. Such a prominent scar may prevent the eyelids from closing; it is very liable to become inflamed and very disfiguring. For these reasons it may be best to resort to the abscission of the front of the eyeball. In this case anæsthesia must be employed. The eyelids are held apart with a speculum, and the eyeball being fixed with a hooked forceps a small puncture is made into it with a sharp-pointed knife behind the line of the ciliary processes, large enough to admit one of the blades of a scissors, with which the bulging part is cut off, care being taken that the line of the incision lies just behind the ciliary region. The crystalline lens is generally included in the piece cut off, but if not, it must be next removed. If toward the horizontal equator of the eyeball the line of the incision is taken a little further backward in the sclerotic, the lower and upper half circles

will fall together more neatly, and will not form the troublesome angle resulting from a truly circular abscission, which sometimes makes the introduction of an artificial eye difficult and its use painful. In small children I never sew up the wound and seldom apply anything but water-dressing.

An occasional and very troublesome sequel of infantile purulent ophthalmia is inflammation of the lachrymal sac. I think it is more frequent where an acute ophthalmia instead of thoroughly ceasing has passed into a sub-acute chronic form. If the sac suppurates the abscess can not be opened too soon, and if, after the subsidence of the inflammatory swelling, epiphora and a chronic mucous discharge continue, the lower punctum and canaliculus should be slit up into the sac. Through this the contents may be gently pressed out several times a day; and once daily after emptying the sac in this manner a few drops of a solution of sulphate of zinc, two grains to the ounce, may be dropped into the corner of the eye. If the nasal duct is strictured it will be best to adopt an expectative plan of treatment until the child is older.

In view of the dangerous results which may follow this disease if it is not attended to in time, or if the treatment employed be not adapted to the necessities of the case, it behooves us to consider the prophylaxis. In case a woman is affected with a gonorrhœal discharge before parturition, the physician, if aware of this, should take due measures to relieve the vaginal passages; and I may here say that I know of no better and more satisfactory method of doing this than that recommended by Dr. E. R. Palmer in the "Louisville Medical News," number IV, which is as follows: The patient, with all of her garments fully loosened, is placed upon her knees on the floor and caused to place her cheek and breast upon a small pillow, allowing the back to "sway," so as to elevate as high as possible the ostium vaginæ, the knees being at the same time well separated from one another. He then separates the labiæ, and instantly the air enters the vagina audibly, the uterus falling forward and downward towards the diaphragm. The nozzle of the syringe is introduced, and the vagina may be satisfactorily and completely washed out, the water returning through the labial cleft into the basin.

The vagina may be filled with whatever medicated solution is used, allowed to remain closed and the patient quiet for a few moments; it is then emptied and again filled. If this is done twice a day the gonorrhœa will be relieved in from two to ten days. If, however, the doctor does not learn of the maternal affection until labor has already set in, I would recommend a plan practiced by my father, Dr. Samuel Brandeis, of Louisville. He allows the labor to proceed naturally, taking care that the bag of waters does not rupture until the head protrudes from between the lips of the vulva; he then pricks the bag, allowing the waters to escape in a gush, and delivers the child as rapidly as possible. By observing this precaution it matters not how tedious the labor may be, or how profuse a gonorrhœal discharge be encountered, the eyes of the child do not come in contact with the virus, and will thus escape infection.

When the child is born, the nurse should be cautioned to be careful in washing its eyes, nor should too much soap and water be employed, for the same may—even if there be no other cause, by irritating the delicate mucous membrane of the conjunctiva—suffice to set up an irritation, which being neglected will speedily develop into a profuse active blennorrhœa.

The bad results which may follow severe cases of ophthalmic neonatorum have already been incidentally mentioned, but I will give them again. They are: A congested state of the lids and enlargement of the papillæ upon them, leading to frequent relapses—nebula and leucomata; or, in other words, superficial and deep opacities of the cornea, superficial keratitis, perforating ulcers, or sloughing of the cornea, leading to escape of the aqueous, and even of the lens; capsular cataract, and according to whether the iris has or has not formed adhesions to the margins of the ulcer anterior synechia and anterior staphyloma; posterior synechia; and lastly, collapse of the globe and general atrophy.

The following notes will show the progress and termination of an unusually severe case:

A little boy, ten days old, was brought to me by his father, a dairyman, on the 18th of April, with purulent ophthalmia.

The parent stated that he had noticed the discharge for five or six days past, but the eyes of the child had been weak from birth. The mother, I was told, was a pale, delicate-looking woman; had given birth to two children within eleven months, and suffered greatly from leucorrhœa. Both of the eyelids of the child were swollen and congested. The discharge was copious, thick, and yellow. There was much difficulty in getting a view of the cornea, but that of the right eye appeared to be opaque and superficially ulcerated, while that of the left eye was clear. I washed the eyes thoroughly with cold water, and dropped three drops of a three-grain solution of nitrate of silver into each eye. The father was directed to keep the eyes thoroughly clean and to wipe them out with a clean linen rag every hour.

Two days after, April 20th, I saw the child again, and found that the discharge was lessened and the congestion diminished. Finding that the child was improving, the parents relaxed their care, and three days after the baby was again brought to me, suffering from a relapse. The lids were much swollen, the right to such a degree that no examination of the cornea could be made. The left was still clear. The mother was now told to wash the eyes assiduously with cold water, and to keep them thoroughly clean by removing the discharge as soon as it had formed. In a few days the swelling of the lids had again subsided, and I was able to examine the cornea thoroughly, and found the right to have a moderately dense, white, nebulous patch occupying its lower segment, through which the pupil could be indistinctly seen. Ordered a two-grain solution of atropia.

The next day, April 27th, the child was worse. The right cornea appeared flaccid and depressed, and the opacity had increased in size and density, although the discharge had diminished. The left cornea still perfectly clear.

On the thirteenth day of attendance the flaccid cornea began to yield to the intra-ocular pressure and to form a staphylomatous protrusion, which, owing to the extension of vessels over and in the substance of the cornea, assumed a dim-red color. Atropia and a compress bandage applied.

The next day the softened portion of the cornea had become detached, and a small, clear bead, formed by the protrusion of the elastic lining membrane of the cornea, appeared. This was touched with nitrate of silver, and a bandage again applied.

On the nineteenth day, the mother having failed to bring the child in the interval, the staphylomatous protrusion was nearly the size of a pea, and oval in form. The discharge from the right eye was still considerable, but that from the left had ceased, and the cornea was clear. This protrusion was again touched with the nitrate of silver; a puncture was made through the lower portion of the cornea.

During the following two weeks the protrusion gradually diminished, and the discharge ceased in the right eye, but the left began running again in consequence of exposure and neglect.

At the end of the fifth week of treatment I made the following entry in my case-book: "But little discharge from left eye; staphylomatous protrusion of right cornea reduced to size of a pin's head, the corneal tissue around the protrusion opaque; little or no discharge from the eye.

On June 23d the child was again brought to me with a recurrence of the discharge, having caught cold on the 13th; both eyes were discharging pus freely. Mild aperients and plain food ordered, and washing and nitrate of silver used as before. The symptoms soon began to diminish.

On the 29th of June the child's eyes were clear and free from discharge; the right eye wonderfully better, presenting only a leucomatous patch on the lower segment of the cornea, to which the pupil is adherent through a greater part of its extent. The upper part, however, through which, there is no doubt, the child can see, remaining free.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

The Central Kentucky Medical Association.

The Association met at Harrodsburg, Ky., in the Grangers' Hall, on the 19th of July, 1876, at 10 o'clock A. M., the President, Dr. A. D. Price, of Harrodsburg, in the chair. Present—Drs. McRoberts, H. Brown, Meyer, Harlan, McGee, W. A. Brown, Willis, Gaither, Craig, McClellan, U. S. A., McMurtry, Neet, Huffman, J. L. Price, Cowan, Tucker, A. D. Thompson, McKee, Johnstone, Burdett, C. H. Spilman, Erwin, and R. C. Brandeis, of Louisville.

The opening paper on "Valvular Diseases of the Heart, their Diagnosis, Complications, Pathology, and Treatment," was read by Dr. S. P. Craig, of Stanford, the appointee.

He said he had found the question as given him embraced too large a field for the time allotted him, and he had, therefore, confined himself to a few of the more prominent diseases of the valves of the left heart, which he would follow at a future meeting by a voluntary paper on the other affections of the heart.

The most frequent and prominent diseases to which the left valves of the heart are liable, he said, are aortic obstruction, or the conditions that give rise to it, aortic regurgitations, mitral obstruction, and mitral regurgitation, and of these he would speak to-day.

With the aid of a diagram, he gave an excellent demonstration of the anatomy of the heart, together with its action and sounds in health; after which he took up these several affections and detailed minutely the symptoms, causes, pathological changes, and physical signs, as well as giving the differential diagnosis and prognosis of each.

In considering the treatment, he said it was at the best not much more than palliative. Active exercise, alcoholic stimulants, all excesses, and excitement should be carefully avoided. Rest, both mentally and physically, should be enjoined. In those cases where the tissue degeneration of the heart requires something to regulate its tumultuous action, digitalis may be

given with benefit. It acts as a tonic, as well as a diuretic, thus relieving the dropsy and tissue infiltration that generally accompanies cardiac disease of long standing. It should not be administered in those cases where the power of the heart is undiminished, as, for example, in those instances of hypertrophy of the heart, when the hypertrophy has compensated for the dilatation. When the hypertrophy is characterized by feeble pulsations, due to tissue degeneration of the muscular walls of the heart, caused by obstruction to the circulation of the coronary artery, it acts sometimes with marked efficacy, giving much relief.

The tissue degeneration is most frequently met with in aortic regurgitation, when the heart having already become enlarged from increased effort, the recoil of the aorta fails to throw the blood through the coronary artery, on account of the insufficiency of the aortic valves. Iron was also referred to as a valuable remedy on account of its tonic properties.

In conclusion he advocated, as an important element in the treatment, implicit obedience to the general laws of hygiene, and avoidance of every disturbing influence. Whilst a permanent cure may not be expected, life may be greatly prolonged by pursuing this course.

The discussion of the paper was, by motion, postponed to a later hour, to give place to the address of Dr. McClellan on the "Etiology and Treatment of Epidemic Cholera."

Dr. McClellan said he was very much gratified to be able once more to attend a meeting of the Association, and it afforded him much pleasure to respond to the invitation extended him at the last meeting. His official duties interfered with his attendance at the meetings, but it was his desire always to be a member of the Association.

Speaking entirely from notes, he occupied an hour and a half, and with the aid of maps and charts, made the subject, of which he is so eminent an authority, exceedingly interesting and intelligible. He said: "The fact that several outbreaks of cholera have occurred during the past year in India, and that the disease has, during the same period, been epidemic in Turkey, in Asia, is my excuse for having selected, upon this occasion, so threadbare a topic for your consideration."

After alluding to the great antiquity of epidemic cholera, he spoke of its Eastern origin, and described at length the great religious festivals held in certain of the presidences in British India for many generations, from which it originates, and the method, as well as pointing out the various routes by which it is transmitted to the outer world. The experiments with, and examinations of, the cholera excreta by Macnamara and others were given, and the agency of common carriers in spreading the disease explained.

Passing on to the epidemics of the disease which have visited North America, he showed in each instance how the cholera virus had reached our shores, and the manner by which it was disseminated inland. Of the last epidemic he related much that was valuable and instructive, and the series of propositions set forth by the speaker relative to the nature, origin, dissemination, etc., etc., of the cholera poison, were supported by an irresistible array of facts and observations.

In conclusion, he touched upon the treatment, dwelling forcibly upon the great efficacy and value of the acid treatment, and preferably the mineral acids. He utterly repudiated at the outset the malarial origin of cholera, and in disproof of it, brought to bear much and conclusive evidence.

At the conclusion of his address, to which the most respectful attention was accorded throughout, the thanks of the Association were unanimously voted him for this, the chief feature of the meeting.

Dr. McMurtry moved that Dr. R. C. Brandeis be requested to address the Association, at the close of the debate, on some subject connected with ophthalmology.

Dr. H. Brown offered as an amendment that the debate be postponed until all the papers were read, which was accepted and passed.

Dr. Brandeis, after some complimentary allusions to the Association, in which he expressed the pleasure it gave him of attending a meeting, read an excellent paper on "Ophthalmia Neonatorum."

Dr. Craig said the subject of Dr. Brandeis' paper was one of unusual importance to every practitioner, and his paper of great

practical value. He had listened to it with much interest, and he thought the author deserved the thanks of the Association. He would, therefore, move that they be voted him for the admirable paper he had just read, which was passed unanimously.

Dr. McRoberts, of Stanford, reported a case of "Hepatic Abscess," exhibiting at the same time the liver, weighing six pounds. The abscess contained at death a half pint of pus, The case occurred in a negro man aged sixty, an habitual dram-drinker for many years, but had had no serious illness up to a year ago, when he suffered an attack of dysentery, from which, however, he recovered. Soon after, the unfavorable symptoms set up, resulting in death last April from apnœa.

Appended to the report was an admirable résumé of the clinical history, diagnosis, and treatment of the disease.

Dr. Cowan, of Danville, read, as an essay, his report as chairman of the Section on the Progress of Surgery, Surgical Pathology and Anatomy, deferred from the last meeting. He gave, as one of the most notable events of the year, an account of the operation called by its originator, Dr. Battey, of Georgia, "Normal Ovariotomy," condensed from the paper of Drs. D. W. Yandell and Ely McClellan, published in the October, 1875, number of the "American Practitioner." Reference was also made to the operations of Drs. Marion Sims and T. G. Thomas, which appeared in "The American Journal of the Medical Sciences"—Art. XXV.—for July, 1876.

In his comments on the operation, he said: "It has been objected to this operation, and the same objection will again and again be brought forward, should it become a procedure accepted and practiced by the Profession successfully; that it will be resorted to and abused by such women, married and single, as may desire to escape the responsibilities and perils of maternity. Doubtless such objections would be realized in many actual occurrences, and the crime of abortion would eventually be superseded by the still greater crime of self-mutilation. The practitioner of the healing art, however, has, I conceive, nothing to do with such consequences, but must administer to innocent sufferers faithfully and fearlessly such remedies as in their cases are adapted to their relief. Such special pleading has been

urged, often with too much success, against the use of all the blessings which a wise and beneficent Creator has bestowed on man for his use. Narcotic and stimulant drugs are notable examples of some of the most precious remedies known to our art, perverted from their proper and beneficent end to baser purposes. This operation, then, of Dr. Battey's, should, in my judgment, stand or fall through means of a purely scientific test."

Dr. McClellan said, of the ten cases operated on by Dr. Battey, five had been under his observation since the operation. Of these five one died, and the others had not in the least been benefited. After giving an outline of the cases and the manner of operating, he said that he knew of no operation in surgery that promised so little as this, and he declared emphatically that no patient of his should ever be subjected to the operation of normal ovariotomy, unless in the last extremity.

Dr. Tucker, of Danville, read a paper on "The Relations of the Urine to Diseases of the Skin."

Much information of a useful and interesting character was presented by the writer in the paper on a subject which has been hitherto too much neglected by the general practitioner.

Dr. McMurtry read a report of an operation for vesico-vaginal fistula performed by Dr. E. Souchon, of New Orleans, at Danville, Ky., last month, in the presence of the physicians of that place. The operation consisted in closing the ostium vaginæ with quill sutures of silver wire, thus converting the entire vagina and uterine cavity into an immense cloacus, which would retain the urine. A large portion of the bas-fond had sloughed away, the bladder had become completely inverted, and was protruding from the vulva. The urine dribbled away constantly from the exposed mucous surface, and the patient had not walked for a long time without great pain and difficulty. At this date she is able to get about with comparative ease.

Dr. Huffmann, of Lancaster, introduced a patient (a middle-aged man), with an obscure disease of the left leg. The leg was considerably swollen, skin reddened, and studded with ecchymosed spots. There had never been much pain. Dr. H. said he could gather nothing from the history of the case to indicate

the character of the trouble. Some two years ago there was for a time some pain along the inner aspect of the right thigh and leg. The patient denied ever having had syphilis. The leg presented its present appearance when first seen by him.

Considerable discussion followed as to the nature and cause of the disease, and various opinions were advanced relative to it, but no satisfactory conclusion was reached.

Dr. Johnstone, of Danville, read a paper on "Cataract," with a report of a case. The patient (a negro seventy-one years old), was the subject of "Mature Cortical Cataract" of both eyes, and was operated on by Dr. J. some weeks ago with the assistance of Drs. Harlan, McKee, Nelson, and Mr. Dunlap (medical student), with a good result.

Introductory to the report was an interesting review of the several operations for cataract, in which the nature and cause of the affections were discussed.

Dr. Brown, of Hustonville, delegate to the American Medical Association, gave an extended report of the proceedings, in which connection he presented an improved splint for Colles' fracture which had been exhibited before the Association.

Dr. Harlan presented an improved obstetrical forceps, designed by Dr. Joseph Holt, of New Orleans, which attracted considerable interest.

The Secretary exhibited "Part II, Surgical Volume, of the Medical and Surgical History of the War of the Rebellion," and "Medical Statistics of the Provost Marshal General's Bureau," presented by Hon. M. J. Durham, M. C.

Dr. Craig presented a heart showing aortic regurgitation, and Swayne's "Obstetrical Aphorisms."

Dr. Cowan presented "Carter on the Eye."

The President called up the discussion on the opening paper, but owing to the lateness of the hour, no comments were made.

Dr. McMurtry introduced the following resolution, which, after some remarks, was passed: "That members of this Association desiring to read voluntary papers, reports of cases, etc., be required to notify the Secretary at least ten days previous to the day of meeting, so that the order of exercises may be arranged beforehand for the use of the Chair."

The President introduced Mr. J. E. Keller, Traveling Agent for the American Mutual Benefit Association of Physicians, who made a brief statement and explanation of the purposes of the Association.

Dr. McClellan, after some eulogistic remarks touching the life and labors of the late Dr. Jackson, in which his devotion and love for the Association were dwelt upon, moved that hereafter the name of Dr. John D. Jackson be always placed at the head of the roll of members of this Association, which was carried by a unanimous vote.

The Committee on Questions reported *Phthisis Pulmonalis, its Diagnosis, Pathology, and Treatment; the latter with Special Reference to Climatology*, for discussion at the next meeting, and the President appointed Dr. A. R. McKee, of Danville, to open the debate.

After a vote of thanks to the members from Mercer county, and Reed & Co., druggists, for hospitalities, and to the Grangers for the use of their Hall, the Association adjourned at 6 P. M., to meet at Stanford on the third Wednesday in next October.

GEO. T. ERWIN, M. D.,
Permanent Secretary.

Marshall County Medical Society.

The Society met at Briensburg, Ky., July 7, 1876. The meeting was called to order at 10 A. M. by the President, Dr. W. W. Gilbert. Prayer by the Secretary. The following members answered to the call: Drs. W. W. Gilbert, President; D. G. Smith, Secretary and Treasurer; J. R. Trout, H. Pinner, Benj. Franklin, J. M. Mooney, and Samuel Graham, also Dr. Childs, visiting. Minutes of the last meeting read and approved.

Reports of officers were called for, whereupon the Secretary and Treasurer offered his report, which was read and received; also report of J. R. Trout, former Treasurer, which was read and received.

It was moved by Dr. J. R. Trout, and seconded by Dr. Graham, that all previous Treasurers make their report at our next meeting whose reports were not on file. Carried.

Reports of Censors were then called for, whereupon the following report was presented and read: We, the undersigned Committee of Censors, would respectfully beg leave to submit the following as our report on the charges preferred at the last meeting against Dr. A. J. Smith—viz., that Dr. A. J. Smith was notified of the nature of the charges filed against him by Dr. Samuel Graham; after which we, the committee, proceeded to take proof at the time designated for the purpose; and also that Dr. Smith had knowledge of the charges and was invited to be present in order for defence. (The charges preferred at the last meeting being that Dr. A. J. Smith had violated section 2d of our by-laws in dealing in patent medicines and drugs; also recommending the same to persons specified.—D. G. S., Sec.) And we having sufficient proof of his guilt as charged offer the following resolutions: "1. That Dr. A. J. Smith be expelled from this Society; 2. That we refuse to hold any further medical communication or consultation with him."

[Signed.] J. R. Trout, Chairman,
D. G. Smith,
Benj. Franklin.

The meeting then resolved itself into a Committee of the whole. The President appointed Dr. J. M. Mooney to defend Dr. Smith, and proceeded to take the proof, which was omitted in the Censor's report; after which, Dr. Smith was expelled by a unanimous vote.

The President then appointed Drs. Graham, Pinner, and Franklin to draft suitable resolutions on the death of our worthy brother, Dr. J. N. Meshew, to be presented and read at our next regular meeting.

It was moved by Dr. Graham, and seconded by Dr. Gilbert (Dr. Mooney being in the chair), that resolution No. 3, passed at our last meeting, be reconsidered.

The question was put and carried, and resolution No. 3 was so amended as will hereinafter appear.

The preamble with these resolutions were ordered to be placed upon the records of the Society, and are as follows:

Whereas, We, the physicians of Marshall county, recognize the importance of the first great law of Nature, self-preservation, and view with a feel-

ing sense of outraged justice the unjust discrimination made between classes, and believe it to be a duty we owe to ourselves, our families, and the exalted character of our noble calling, for the purpose of self-protection, to adopt some means as a financial relief against the present system of collecting bills, that the services of the votary of medicine may be rewarded; and

WHEREAS, The farmer, mechanic, merchant, and the various producers and manufacturers, upon whom in the very nature of things the physician relies for supplies, have adopted an exclusive cash or short-credit system; and

WHEREAS, We fully recognize the importance of a uniform system in business, and view with disparagement to ourselves the great advantages other professions and avocations have over the medical in the collection of bills, securing them by lien, mortgage, or bond with approved security, refusing without pay to grant the articles or commodities desired, thus throwing the most reliable safeguards around their business and insuring adequate means of support to themselves and families; and

WHEREAS, Cash is demanded of the physicians for the necessaries of life, as well as the drugs with which he plies his daily avocation; and

WHEREAS, In consequence of the oft-repeated failures to collect a just and deserving bill in a reasonable length of time, together with the never-pay system of some, the physician is often pressed and financially embarrassed, unable to meet the demands of his family and buy the needed appliances of his noble profession, and thus denied one of the grandest privileges appertaining to his art—viz., keeping pace with the advance of medical science; and

WHEREAS, Duty to ourselves, our families, as well as justice to our patrons, demand reformation of our present system of collecting; therefore, be it

Resolved, 1. That all medical accounts shall be due as soon as the services are rendered or the patient discharged.

2. That in any unfortuitous combination of circumstances, or absolute inability to pay, the physicians may give indulgence for a limited time.

3. That this Society adopt a rule to require each and all of its members to present their accounts for payment by the first of January and July in each year, and if said accounts are not paid within ninety days thereafter, said delinquents are to be reported to the Society at its next meeting, and further services are to be refused by the members of this Society until said accounts are paid or secured by mortgage on property sufficient in value to pay the debt.

Resolved further, That the members of this Society shall not hold consultations or advise with any one not a member in good standing in this Society or some other of a like character, or with any one who does not conform strictly to the teachings of the Code of Ethics, as recommended by the American Medical Association.

Resolved further, That a copy of these resolutions be furnished the "Richmond and Louisville Medical Journal," the "Paducah Herald," and the "Weekly News" for publication.

Adjourned till 7 P. M.

NIGHT SESSION.

Call to order was made by the President, Dr. Gilbert. Quite a number of ladies present, as well as young gentlemen.

Dr. Mooney related a case of Pulmonary Abscess, which elicited a lively and animated discussion, in which all present took part in a manner worthy of remark, showing a desire to arrive at truth, and to be satisfied with nothing less.

Dr. Trout gave a practical lecture on Surgery, showing the necessity of a more conservative practice among country physicians, and also the want of more skill in practical surgery. The Doctor's remarks related to various practical points, and were well calculated to enlist the attention of all who love scientific work.

Dr. Graham delivered an eloquent address on Therapeutics, which was received with unusual favor, and it is to be regretted that the address is not written.

All present had something to say in the way of encouragement for the welfare of our little Society, and for the advance of knowledge, etc.

Dr. Graham was then appointed to be our critic for the ensuing year.

Drs. Franklin and Pinner were appointed to deliver an address on Pneumonia at our next meeting, and Drs. Trout and Graham to discuss the use, abuse, and effects of chloroform in obstetric practice.

On motion, adjourned to meet at Benton, Ky., on the first Friday in October, 1876. D. G. SMITH, M. D., Sec'y.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

LONDON, ENGLAND, June, 1876.

LISTER'S ANTISEPTIC METHOD.

Dear Dr. Edwards,—I can not lose sight of a promise made a long time ago to contribute to your excellent journal, and the leisure that permits me to do so has only now arrived. I am waiting for the Edinburgh train to take me on to London,

having broken train to view the Minster and other curious features of this fine old city—one of the most interesting in its antiquities in all England. It is pleasing to note that the preservation of the exquisite old ruins of the Abbey of St. Mary's has only been assured for the future through the beneficence of a member of our Profession, who left £10,000 to the Yorkshire Philosophical Society. This bequest of Stephen Beckwith M. D., whose tomb is a prominent object in the north transept of the great Cathedral, has enabled the Society to improve its botanic garden, and preserve many valuable relics in their fine grounds and museums, which are a chief ornament to the city.

By the kind aid of Professor Lister, of Edinburgh, I have just been studying the practical working of so-called "antiseptic surgery" in the hands of the masters of the art. The steady advance of this prominent feature in modern surgery, especially its recent adoption by the leading surgeons of Germany—Thiersch, Volkmann and Von Nussbaum, renders it impossible for us to ignore its claims to careful examination, and, possibly, to adoption.

The theory of Lister is based upon the dictum of Pasteur, thus far undisputed, except by Bastian, of London, that putrefaction is due to the presence of microscopic germs. Lister holds that the tendency to putrefaction is the source of most, if not all, the disturbing influences liable to interfere with the process of normal repair after injury, and that these pests of the surgeon—diffuse suppuration, pyæmia, erysipelas, etc.—can be avoided with certainty just in proportion as he can prevent the entrance of putrefactive germs into the wounds under his care. This is sought to be accomplished by Lister by keeping a wound, such as is made by amputation, for example, constantly bathed in a fine, foggy spray from a dilute solution of carbolic acid directed upon it during the operation, and during each subsequent dressing; and also by employing a prepared carbolized gauze, with oiled silk, most carefully applied as dressing afterwards. All this is done with scrupulous fidelity and exactness, for the avowed purpose of keeping out pretrefactive germs. If the wound can be kept sweet, the process of repair, he asserts, will go on as nearly as possible as it does in an ani-

mal, or, under a scab, in man—*i. e.*, with a minimum of pus formation.

Now, whether the theory thus held be true or not, I am free to say that the results of the practice based upon it are certainly better than those ordinarily attained in surgical hospital practice. In wounds and operations involving large joints I know of instances of repair, even without loss of function, that occurred by this method, which are certainly very exceptional by ordinary methods of treatment. One case, for example, under the care of Mr. Thomas Smith, of St. Bartholomew's Hospital, of a man whose knee was crushed between a railroad car and a platform, the tissues being forcibly abraded and ground away so that the joint was freely opened—a case in which amputation would be usually regarded as inevitable, and which was so regarded by Dr. James Paget, who saw the patient in consultation. Antiseptic treatment in the manner I have detailed was carefully instituted and carried out, with the result of recovery *with good use of the joint* In another case of gelatinous degeneration of the wrist-joint, where there seemed no alternative save amputation, Mr. Lister cut into the joint freely under spray, inserted drainage tubes, persevered with antiseptic dressings, and secured entire recovery with motion.

If space permitted, I could give you examples also of lumbar and psoas abscess recoveries, as a rule, under the persistent use of the antiseptic dressings; pus formations in these cases seem to be arrested, and coïncidently, consolidation of the walls of the abscesses and sinuses follows. The process requires time, drainage and careful dressing; but the cases thus treated get well, whilst under other modes of treatment, the rule is that they die.

Now, it may be, as some assert, that equally good results—which, up to the present time, have not been stated in figures—may be obtained by others without the laborious care which the details of the antiseptic dressing requires. Mr. Collender, of St. Bartholomew's Hospital, claims equally good results from his system of "isolation," with extreme attention to cleanliness. It may be that the results obtained by Lister and his colleagues are accounted for by the sound surgery they employ, and the

great care and personal attention they give to their cases. In answer to my question, however, whether the same results would not follow the use in spray of a solution of boracic, or salicylic acid, the same great care in dressing being employed, I was told that this had been faithfully tried, but that "wounds thus treated in a few days invariably stunk." It has also been asserted in London that the results of surgical operations have improved, and are constantly improving, from other appreciable causes—such as the greater attention paid to hygienic precautions, the greater amount of air supply allowed to patients, and, I may add, above all, to the better nursing since the institution of the schools for trained nurses. These, my dear Doctor, are questions to be answered in the near future, and their great interest would seem to justify me in thus taking up your valuable space by their mention.

Any one interested in the subject of antiseptic surgery will find a very able review of the literature of the subject, by Dr. Joseph Bell, one of Mr. Lister's colleagues at the Royal Infirmary, in the "British and Foreign Medico-Chirurgical Review" for October, 1875, which is fair and exhaustive; also, Mr. Thomas Smith, one of the surgeons of St. Bartholomew's, has published the first number of a series of papers on the subject, as the result of a year's trial of it, in a recent number of the "London Lancet"—say within the past two months. This, he tells me, will be continued, and you will find it good.—Wm. H. Van Buren, M. D., *August No. Virginia Medical Monthly.*

Marshall, Texas, Aug. 8, 1876.

Dr. E. S. Gaillard:

Dear Sir,—The article on "Cholera Infantum" in the July number of your Journal, by Dr. O. F. Manson, of the Medical College of Virginia, was a very able and comprehensive document, and the very plausible views advocated by him justly deserve the attention of the Profession. But I think he claims too much for this malady when he tells us that it is entirely an American disease, and unknown in the Old World. I have before me at this moment "Trousseau's Clinical Medicine," and turning to Vol. II., page 454, I find one of the most admirably

written accounts of cholera infantum I have ever read. Even the great Trousseau claims that the name of the disease, "Cholera Infantile," originated in France, the American physicians calling it, as he says, "Summer Disease."

I will quote a few lines: "Some days ago, when we were getting into the very hot weather, I said that most probably we should not be long without seeing cases of the disease which in France is called 'cholera infantile,' and which American physicians have described under the name of 'summer disease.' I accept the name 'cholera infantile' because its use has been ratified by long custom, and because I am opposed to the introduction of new names when the old ones are familiar and well understood. Were it not for these reasons, I should prefer to call the disease by its American name, because I think it much more appropriate."

I have also before me "Practice of Medicine," by Mackintosh, an Edinburgh professor, bearing date of 1844. In treating of the grave forms of "weaning brash," the old Edinburgh professor clearly describes cholera infantum. But to prove that the disease does exist in Europe, and is known to European medical literature, does not, in my opinion, detract an iota from the merits of Dr. Manson's paper. I think his views advocating malaria as its cause, deserve the highest consideration, and will, I have no doubt, be thoroughly tested by the Profession.

Yours respectfully, CHARLES BROOKE, M. D.

MONTPELIER, IND., 1876.

Dr. E. S. Gaillard:

Dear Sir,—On the night of the 14th of December, 1874, I was summoned to hold a post-mortem examination on the body of L. Foreman before the coroner's jury. Mr. Foreman, in an affray with Henry Shellman, received a shot from a pistol (carrying No. 24 cartridge), in the breast, half an inch to the left of the median line of the sternum, opposite insertion of the fifth rib, passing through the right ventricle of the heart, thence through the lower edge of the upper lobe of the right lung, wounding the spine on the right side opposite the insertion of the fourth rib. Foreman pursued his opponent into

Johnson's store, knocked him down, grappled with him on the floor until he was pulled off, got on his feet, opened his shirt bosom, looked at the wound, and walked across the street, one hundred feet wide; here he staggered and held to the gate; was led back by two friends to the store where he was shot, sank down and died, making in all from the reception of the shot till death ten minutes.

Respectfully, W. C. RANSOM, M. D.

MOBILE, ALA., August 17, 1876.

Dr. E. S. Gaillard:

Dear Doctor,—The August issue is just at hand, and I see that a change has been permitted to creep into my article on "Club-Foot," which, in a great measure, spoils the sense of the same. Do me the kindness to make a note of correction in the September issue, and thus set me right on the description of the varieties of club-foot.

In the fifteenth line from the commencement of the article is printed, "the first, where the foot is twisted OUTWARD" should have been printed "the first, where the foot is twisted INWARD." For in simple *varus*, the displacement is always *inward*, *never outward*.

Then in the twenty-first line, second word on bottom of page, reads as follows: "The foot is turned *inward*, the heel elevated, and the patient rests upon the inner margin of the foot." This should read, "the foot is turned *outward*, the heel elevated, and the patient rests upon the inner margin of the foot."

It is simply a transformation of the two words "outward" and inward"; a change which spoils the whole sense of the paper. Please correct it, as it leaves me subject to the charge of not knowing the directions of club-foot deviations.

Very truly, C. H. MASTIN, M. D.

AUGUSTA CO., VA., June 23, 1876.

We, and each of us, having unintentionally and without cause attacked the private and moral character of each other

in a matter purely professional, hereby retract each and every expression which could be construed as reflecting upon our respective characters as gentlemen.

We furthermore agree to select two physicians and submit to an investigation made by them of the case in controversy, binding ourselves upon honor to abide their final decision.

Signed this the 23d of June 1876.

WM. J. BELL, M. D.,
M. H. CRAWFORD, M. D.

The undersigned, at the suggestion of mutual friends, having consented to act as referees in the adjustment of the controversy between Drs. M. H. Crawford and Wm. J. Bell, as seen in the February and May numbers of the "Richmond and Louisville Medical Journal," believe, as there was no disposition to reflect upon private character, and that the difficulty arose from an honest difference of opinion as regards the case in question; and, as members of the Profession selected by these brethren, are happy to state that the controversy is honorably and amicably settled.

J. ADDISON WADDELL, M. D.,
JAS. R. STOUT, M. D.

CHEMISTRY AND PHARMACY.

"Diruit, ædificat, mutat."—HOR.

Electricity in War.—One of the most curious and interesting objects to be seen in the United States Government Building, in the Exhibition grounds at Philadelphia, is the "Lay torpedo boat." It is constructed of sheet-iron, and looks like a monstrous cigar. Within is the complicated machinery by which it is propelled and guided, the motive power being carbonic acid gas (not "carbolic acid" as a leading New York daily stated in describing it the other day) and the directing agency being electricity, conveyed from the shore by means of a small cable unreeled in the boat. This cable is a mile and a

half long, and the movements of the craft can be controlled for that distance as perfectly as by an intelligent helmsman on board. Press down a button marked "start," and off goes the little vessel on its death-dealing voyage; press another marked "starboard," and it veers its course to starboard; another turns it to "port;" and a fourth "stops" it where its torpedo burden can be discharged most effectively. As it can travel through the water at twelve knots an hour, it can be run out and exploded beneath an enemy's ship before the latter has time to retreat. It can carry four hundred pounds of dynamite, which is enough to demolish the largest vessel.

A short time ago this torpedo-boat made a trial trip on the Potomac, and we append an extract from the report of the experiment in a Washington Journal:

"The inventor, Mr. Lay, stood on the Wyoming, yesterday, with his battery and key-board, and after the boat was shoved out he guided her by means of the cable communication in any direction he pleased. It almost seemed as if the little thing was endowed with volition and was minded to enjoy a morning promenade in the sunshine on the smooth waters of the river. It was beautiful to watch it wheeling and turning about in instantaneous obedience to the will of its creator. As in the picture of the showman, Daniel is distinguished from the lions by the green cotton umbrella which he carries under his arm, so was the tiny torpedo boat distinguished from driftwood on the surface of the water by the two small flags it caried aloft.

"When it reached a suitable position in full view of the assembled spectators, the order was given in the same silent manner in which all the evolutions had been directed, to discharge the torpedo, and forthwith the explosion followed. The little craft was then called to the dock for a brief time and again ordered on another cruise, during which it fairly waltzed about in the water, illustrating the rapidity and variety of movement of which it is capable."

On the whole, this torpedo-boat is one of the most ingenious and promising of the applications of electricity to the science of war; but probably many others equally curious and effective will be devised. At one of the "scientific conferences" which

are being held at South Kensington, London, in connection with the exhibition of scientific apparatus, to which we have before alluded, Mr. N. Barnaby, Director of Naval Construction at the British Admiralty, expressed his belief that fighting ships of the future would be of the class of the Nelson and Northampton, building in Scotland, with central armor protecting all vital parts, a strong shield fore and aft, and a high broadside battery trained and fired by electricity, without exposure of the crew. There can be no practical difficulty in this, and the gunners, ensconced in their floating fortress, will become mere telegraph operators, working their instruments quietly and securely, perhaps below the water-line of the vessel, while the big guns bellow and hurl their ton's weight of shot at each discharge overhead.—*Bost. Jour. of Chem.*

The Barometer in Coal Mines.—Not long ago there was a remarkable decrease of atmospheric pressure in Great Britain which unloosed the winds above ground, occasioning a great amount of loss and damage on land and sea; and it was no less a source of peril to the miners. The damage in coal mines, consequent especially on the sudden fall of the mercury in the barometer-tube, is occasioned in this wise: When the glass is high, and the pressure of the superincumbent atmosphere correspondingly great, the dangerous carbureted hydrogen is prevented from issuing from the walls and sides of the coal-seam; when the pressure is suddenly lessened, the gas escapes from numberless chinks and crannies, and accumulating sometimes very rapidly, until it reaches the proportion sufficient with common air to produce an explosive compound, the naked light that is harmless under more favorable conditions suddenly takes effect, and a deadly catastrophe is the result. In this way the barometer and barometric warnings are almost as useful to the coal-miner as they are to the mariner and fisherman.—*Ibid.*

Bromoform as an Anæsthetic.—Bromoform in a pure state, as obtained by Rabuteau from the action of an alkali upon bromal, appears in the form of a clear, very heavy, and agreeably smelling fluid. Iodine dissolves in it, and colors it of a

carmine-red color. The mode of action of bromoform resembles that of chloroform very closely. When administered in the form of vapor, there is a period of excitement which is followed by deep sleep, in which there is complete anæsthetic relaxation of all the muscles and dilatation of the pupil. The awakening from the effects of the agent takes place tolerably rapidly, even if the inhalation has been continued for half an hour. Rabuteau hopes that it will come into use.—*London Practitioner.*

Chromate of Lead in Ham Coverings.—Prof. Bouchardat, of Paris, in his capacity as member of the Council of Hygiene and Salubrity, recently submitted a report to the prefect of police, in which he pointed out that in a specimen of ham, said to be imported from Cincinnati, the ham was enveloped in a cloth saturated with a yellow substance. This yellow substance proved to be composed of the chromate of lead, a most deadly poison. It was suggested in the report that particles of the substance may become detached and be mixed up with the alimentary substances vended by grocers and others, and thus run the risk of poisoning those who make use of them. By a decree from the police the substances so enveloped were seized and buried under ground, and future supplies are to be treated in a similar manner. Mr. Bouchardat suggested that, if the American purveyors preferred to have a yellow envelope around the alimentary substances they export, the chromate of lead may be replaced by any other yellow substance—turmeric, for instance, which is known to be entirely harmless.—*New Remedies.*

Artificial India-Rubber.—A cheap and useful substitute for India-rubber is prepared by mixing a thick solution of glue with tungstate of soda and hydrochloric acid. A compound of tungstic acid and glue is precipitated, which, at a temperature of 86° to 104° F., is sufficiently elastic to admit of being drawn out into very thin sheets. On cooling, this mass becomes solid and brittle, but on being heated again, soft and plastic. This new compound can be used for many of the purposes to which rubber is adapted.—*Ibid.*

A Novel Vinegar Manufacturer.—The aquarium of the Jardin d'Acclimatization at Paris has lately received a very rare present—namely, a polypus resembling a medusa. In a very short time all of its companions in the tank died, and on looking for the cause, it was found that the water contained acetic acid, which was produced by the polypus. This remarkable animal is said to produce first alcohol and then acetic acid. The manufacturer has been put into solitary confinement, to enable him to continue his industy without damage to others.—*New Remedies.*

Hard Paper.—The French employ chloride of zinc for rendering paper as hard as wood and as tough as leather.—*Ex.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—*Orthopedic Surgery and Diseases of the Joints.* By LEWIS A. SAYRE, M. D., Professor of Orthopedic Surgery, Fractures and Dislocations, and Clinical Surgery, in Bellevue Hospital; Surgeon to Bellevue Hospital; Consulting Surgeon to Charity Hospital, New York City, etc., etc. etc. Issued by D. Appleton & Co., 549 and 551 Broadway, New York. Illustrated with 274 Wood Engravings. By JOHN B. RICHARDSON, M. D., Louisville, Ky.

The author dedicates his work, "To the Physicians and Students who have listened so attentively to my Lectures, and who have sustained and encouraged me in the enunciation of new truths by their devotion and friendship, this work, which I hope may enable them to remember the principles therein taught, is hereby inscribed by their sincere friend."

The work is divided into twenty-nine lectures, and were stenographically reported.

Lecture I.—In this is given a succinct history of Orthopedy, commencing with Hippocrates' views of the treatment of Infantile Club-foot, and relates that "Professor Andry, of Paris, is looked upon as the founder of orthopedy, from the fact that he was the first who attempted to comprise all the deformities

of the human frame *under one head,* and adopted the comprehensive appellation, *orthopedy; orthos,* straight, and *paideuo, I educate.*

"In the year 1789 Thilenius, a physician of Frankfort, described the division of a contracted tendo-Achillis." The operation, as described by Thilenius, was, however, performed by Lorenz March 26, 1782. "Scarpa, in 1803, applied an apparatus for the relief of a distorted foot. Michælis and Sartorius also divided contracted tendons." Dupuytren and Delpech labored in this field. "Stromeyer, in 1830, first performed *subcutaneous tenotomy* for the relief of club-foot, and established it as a principle in operative surgery."

Dr. David L. Rogers, says the author, was the first American to perform tenotomy; dividing the tendo-Achillis in 1834, assisted by Professor James R. Wood.

My father, the late Dr. Samuel B. Richardson, of this city, who had been for more than a year pursuing his profession in both the German and French capitals during 1836–7, was the first to assert and practically apply tenotomy to the cure of other deformities than those of talipes and convergent strabismus, to which it was at that date supposed to be limited, asserting: "Tenotomy is applicable to all deformities caused by contracted muscles." This he did at the earliest date on record, as can be found, with his cases cited, in an article on "Tenotomy," in the second volume of the "Western Journal of Medicine and Surgery," 1840, a copy of which I have placed in the hands of Dr. L. A. Sayre. Referring to it in a letter to me, he says: "The article on tenotomy by your father is of the greatest value. I wish I had seen it before my book was published. I am anxious to look at it all more carefully, so as to refer to it in another edition if it is ever called for."

The author mentions other workers in this department of surgery, as Brückner, Camper, Wenzel, Palletta, Jackson, Sömmering, Heine, Dieffenbach, Langenbeck, and other Germans. Of the French, he cites Bonnet, Guérin, Marjolin, Major, Delpech, and Malgaigne as the more prominent; and of the English, with Little as the most preëminent, we find the names of his colleagues, Tamplin, Lonsdale, Broadhurst, and

Adams. The author notices the obstacles in the way of the reception of orthopedy in this country at first, as we were opposed to innovations of any character, or the subdivision of the medical science into specialties, and thus this department fell into the hands of charlatans and instrument makers.

Subcutaneous myotomy was introduced into this country by Dr. Detmold, of New York City, in 1837, who had been a student of Stromeyer. Dr. Valentine Mott "spent three separate years in the pursuit of this one branch of surgery."

Lecture II.—The author studies deformities, their definitions, special divisions and definitions, and their etiology. It is truly said, the causes of congenital deformities are still beyond our knowledge; therefore they can only be treated according to the condition of the patients at the time you find them. In the case of acquired deformities the causes are generally easily ascertained. He first mentions among them acute and chronic articular inflammation, which in many instances produces reflex muscular contractions, which frequently will terminate in permanent deformities after the disease has subsided that gave rise to them. This is beautifully illustrated in the deformity that accompanies hip-joint disease. The diseased joint excites reflex muscular contractions, and secondary changes occur in the muscles themselves, which "render them incapable of voluntary relaxation when the cause of their contraction is removed, and sometimes it is impossible to extend them by force." To this condition of the muscles was given years ago the name of *contractured.* Little, of London, applying to the same condition *structural shortening;* "a second cause of acquired deformities is perfect and long-continued rest of joints." This I deem one of the many strong arguments against the old treatment—viz., "supine position on a hair mattress with extension by means of a pulley, etc., if need be, for six, or even eighteen months!"

The author then gives the pathological changes which occur in a joint or joints during complete quiescence; "the joint becomes permanently impaired."

A third cause of acquired deformities "may be developed in consequence of various forms of paralysis, those especially

which are sequelæ of diseases dependent upon a blood-poison, as scarlatina, diphtheria, etc. Talipes not infrequently depends upon such a cause." A fourth cause may be some disease of or injury to the spinal cord. *Another*, metallic poisoning of the blood, by lead, etc.

Lecture III.—Congenital phimosis and adherent prepuce is another important cause of acquired deformity; the local and constant excitation is followed by partial paralysis, and the paralysis is accompanied by deformity. The author gives in detail some very singular and interesting cases; one of which was double talipes-equino-varus, caused by phimosis and adherent prepuce; another of *chorea* induced by anxiety, on account of a deformity—"ten toes on her left foot and eight toes on her right foot; on the right hand she had five fingers besides an extra joint on the thumb"—the patient's general health being perfect. He removed her supernumerary toes and extra finger, when all symptoms of chorea disappeared. These conditions as a cause of acquired deformity are entirely new, and of great value. I have heard of one case of enlarged clitoris as a cause of epileptic convulsions, which continued for some time, notwithstanding all the usual remedies were resorted to. It was relieved by ablation of a portion of this organ in the hands of Dr. David Keller, of Paris, in this State.

These are facts, due to the mysterious action of the nervous system upon the muscles and also the nutrition, but it is enough for us to know the cause, and remove it by the performance of circumcision in the one case, and partial ablation of the clitoris in the other, as advised by the author.

Lecture IV.—Deformities, general principles of treatment, operative treatment, tenotomy, myotomy, tenotomes, breaking up of bony or fibrous anchylosis, anæsthetics. The treatment, more particularly in those cases where "the deformity depends upon disorders of muscular power that are of a paralytic nature," should commence early. "Acquired deformities can often be prevented by early attention to the underlying disease which produces them," therefore, the author engages to consider this preventing of deformities in his subsequent lectures. He gives the following rule or law to enable one to decide whether or not

tenotomy is necessary to the removal of a deformity: "Place the part contracted as nearly as possible in its normal position, by means of manual tension gradually applied, and then carefully retain it in that position; while the parts are thus placed upon the stretch make additional point-pressure with the end of the finger or thumb upon the parts thus rendered tense, and, if such additional pressure produces *reflex contractions*, that tendon, fascia, or muscle, must be divided, and the *point* at which the reflex spasm is excited is the point *where* the operation should be performed." The reverse of this holding, if tenotomy, myotomy, or division of fascia is not indicated. He then gives a minute description of the operation, with the after-treatment of the parts. Ordinarily he does not use anæsthetics; in the more severe cases he exhibits them.

Lecture V.—Refers to the mechanical appliances, general principles governing their use, elastic tension, adhesive plaster, electricity, instrument for testing muscular tissue, cases. "The principal requisites of an orthopedic apparatus are simplicity, facility of application, and lightness as far as compatible with the object to be accomplished by its use. It should never encircle a limb or trunk in such a manner as to interfere with the circulation, nerve-currents, or natural movements of the part." In reference to the use of elastic tension, he says: "In my own experience I have been enabled to test the correctness of the now established principle of *extending a contracted muscle*, by the *constant* application of an elastic force, moderately but persistently applied." By its use you can accomplish the object as perfectly as by tenotomy if the muscle has not undergone structural change, or to use his term, has not become "contractured" He makes mention of a contrivance of Barwell, of London, for securing the origin and insertion of artificial muscles, and says: "This suggestion of Barwell will make almost as great an advance in orthopedic practice as did the suggestion of Stromeyer of subcutaneous tenotomy." In applying electricity do not apply it too long, three to five minutes is sufficiently long at each sitting. Do not apply it *too strong*, or you will fatigue the muscles. And his third rule in regard to the *position* of the limb it is well to bear in mind,

viz.: "Always restore the muscle as nearly as possible to its normal position, by means of some artificial support, and retain it there, approximating its origin and insertion before the battery is applied. The principle is, the paralyzed muscle should be placed in such a position that when stimulated to contract in response to the electric current, it can do so *without carrying any weight.*" If this is not acted upon as directed, harm and not benefit is done to the muscle. He notices Duchesne's instrument for removing muscular tissue for microscopical investigation, to determine whether or not the muscle or muscles involved have undergone fatty degeneration. He gives a detailed account of talipes equino-varus of right foot, and valgus of left, with fatty degeneration of parts of the muscles, and his mechanical treatment of it.

Lecture VI.—General principles of treatment of deformities, manipulation, massage, dry heat, baths, inunction, gymnastics, medicinal agents. He holds that *mechanical appliances* are essential after placing the deformed part in its natural position, but the more frequently the apparatus is removed and the parts subjected to manipulations, baths, etc., the surer your success in treatment. Constitutional treatment should be established in some cases; however he does not allow it to hold that prominence formerly assigned to it. Strict observance of the laws of health is all that is necessary, save in exceptional instances.

Lectures VII., VIII., IX., X., and XI.—In these lectures he treats of the anatomy of the human foot, with the varieties and combinations of varieties of its deformities known as talipes. To the usual four forms of talipes, equinus, calcaneus, varus and valgus, he adds another variety, known as talipes cavus or plantaris. When this latter is present as a complication, it does not, as a rule, enter the name of the deformity. When, however, the case presents no other deformity than that caused by contraction of the plantar fascia, the name of cavus or plantaris is used. He thinks *flat-foot* should be considered as a form of valgus. Then is given the individual forms of talipes, their causes and combinations of its varieties, with cases detailed and their treatment as applied by the author, and the results. Under the head of *causes*, he remarks of *congenital* cases:

Spastic contraction is the exception, and paralysis the rule; in their production and continuance; this is also true of the *acquired* form to a great extent. The seat of talipes, with the exception of *calcaneous*, he states is not in the *ankle-joint*, but in the medio-tarsal junction. He says: "*Treatment of these* (congenital) *cases should be commenced the instant the child is born*," and in *acquired* talipes "it should be commenced *immediately upon the receipt of the injury*," as both forms become worse the longer your attempts to rectify them are postponed. All surgeons with much experience in the management of these cases will endorse this statement. He then assigns his reasons why this is so. Among the methods of dressing, he describes with great minuteness the manner of their application: The roller-bandage; the gypsum-bandage; splints of sole-leather, and gutta-percha; and Ahl's felt splint. In those cases where these methods of dressing do not accomplish the end desired on account of too great muscular rigidity, a *constant* tractile force being necessary to meet that object, Mr. Richard Barwell's plan is the best. A simple and ingenious appliance of the author's own devising is described, with its mode of application, as *after-treatment* following tenotomy, prior to use of the shoes selected to be worn as a permanency. It is far superior to any appliance within my knowledge; its great simplicity will bring it into general use, and I especially recommend the reader to consult the author, page 97. Many cases of great practical interest are then cited with sufficient minuteness in illustration of the subjects of the lecture.

Lecture XII.—The subjects of this lecture are "corns, bunions, in-growing toe-nails, supernumerary toes, displacement of tendons, bow-legs, genu-valgum, or knock-knee." In reference to the three first subjects, I give the authors words. "The amount of agony and torment suffered on account of corns, bunions, and in-growing toe-nails, is all the apology I can offer for bringing these subjects before you. Our business, as surgeons, is to relieve human suffering, if possible, no matter whether it comes from a corn or a cancer." The treatment of these cases he "does not feel beneath his dignity, indeed to do anything that will relieve human suffering." He gives a very interesting

case of displacement of tendons, those in the groove behind either malleolus, with its history and treatment, caused by wearing high-heeled shoes. In this lecture he gives the history and treatment of a very extreme case of genu-valgum in a native African.

Lecture XIII.—Here is taught the anatomy, pathology, symptoms, and treatment of the diseases of the ankle-joint. "It is simply a hinge-joint, having a to-and-fro movement, and *no other*. The articulation between the astragalus, the lower extremity of the tibia, and the two malleoli, is so complete, close, and perfect, that it will admit of no lateral movement whatever. This is one of the statements which I make with positiveness. The apparent lateral motion which takes place is not at the astragalo-tibial articulation, but below, at the articulation of the astragalus with the os calcis. When the toes are turned out or in, *the leg being extended*,* it is in obedience to rotation of the leg and thigh at the hip-joint; but if the leg is flexed upon the thigh, *the lateral motion is caused** by the action of the biceps and tensor vaginæ femoris, giving a revolving motion to the head of the fibula." If this be the true physiological and anatomical explanation of the lateral movement of this joint, it not only materially aids in the proper management of diseases of the joint proper, but also of all deflections from the correct relative positions, as we find in the varieties and combination of varieties of talipes. In most cases of ankle-joint disease we have to deal with, says the author, "an extravasation of blood beneath the synovial membrane, or between the cartilage and bone, quite analogous to the 'blood-blister' which is formed upon the external surface whenever the skin is severely pinched but not broken." Thus a slight injury, if allowed to go on unrelieved and unattended to, may result in the destruction of all tissues connected with a joint. These cases are all known as "scrofulous disease of the ankle-joint," but most cases are not scrofulous in their nature. The peculiar cachexy you find in most of these is a result of the constant local trouble resulting from some traumatic cause. He

* The words in italics are my own.

admits, however, those cases which do occur in patients of a scrofulous diathesis are much less amenable to treament, and are more rapidly developed. Early recognition of these cases is desirable, and especially slight injuries of the joints, as they are much more apt to be neglected, and consequently the more dangerous. He describes one of these *slight* cases and its proper treatment in this, its first stage. In speaking of massage in this connection, he remarks: "You may call this (the employment of manipulations and frictions) 'massage,' if you have a fancy for a new name, but I have employed this plan of treatment for many years, and long before the term 'massage' was applied to it. It is, however, sometimes necessary that a method of treatment should go across the water and be baptized with a new name before it becomes popular."

Lecture XIV.—Here is given a description of the author's instrument for making extension and counter-extension in cases of ankle-joint disease, when from either neglect or unwise treatment the affection has passed the first stages and has reached the stage of ulceration and caries of the bony structures involved in the formation of the joint. It is impossible in this joint, as can be done in either the hip or shoulder-joints, to exsect diseased bony tissue, unless great damage be done the superincumbent or overlying vessels and muscles, such as will not warrant the performance of exsection in this region. This being known to the author, he devised his instrument, which, if correctly applied as directed by him, I know, from personal experience, will accomplish the end desired, and in young subjects allow out-of-door exercise without the use of crutches at the same time. "If, however, the symptoms show the system to be suffering from the poison of the pus retained in the joint, or if the joint being open, the patient is sinking under the drain of prolonged suppuration, the diseased bone should at once be removed and a perfect drainage established, so that no pockets or sinuses can be formed. If this latter accident be allowed to occur, the disease of the bone will not be arrested, and the operation will, therefore, be useless."

He then gives a case in which any treatment short of the removal of the carious bone *sub-periosteally* would not answer;

after the performance of which he drew completely through the joint and through the other sinuses a large seton of oakum saturated with Peruvian balsam, which he allows "to remain as long as there is dead bone and excessive suppuration; but when the dead bone has all been exfoliated and removed, the pus diminished and of a healthy character, then the seton can be discarded, the sinuses allowed to close up, and passive motions commenced, and increased with judgment and discretion, in order to make a new or artificial joint in the new bone formed from the original periosteum, left for the purpose when making the resection."

Following the above case, he gives others of more or less diseased conditions, with their histories and appropriate treatment. At the close of this lecture, he relates an interesting case of disease of the tarso-metatarsal articulation, with the symptoms by which it is to be recognized and its treatment; also a very excellent appliance for making extension and counter-extension in this form of joint trouble.

Lecture XV.—In this lecture the author enters upon diseases of the knee-joint, which, on account of its exposed position, is more subject to disease and accidents than any other articulation in the body. Giving first the anatomy of the joint; then under its pathology he says, one or more or even all of the structures of this joint may be involved in diseased action at the same time. He, however, studies them separately, "to gain a clear idea of these different affections," taking up seriatim, synovitis (acute and chronic), ligamentous rupture, and extravasation of blood, giving the modes of diagnosis of these, both from symptoms and manipulations. He lays stress upon ascertaining clearly the "locus in quo," the diseased action commenced, as upon this depends the character of the disease as well as the nature of your treatment." "After the disease has become developed sufficient to give rise to the symptoms just mentioned, the case will present an unmistakable example of what is known as 'white swelling,' or 'scrofulous disease of the knee-joint,' according to the authorities of our profession;" but the author admitting it may and does occur in subjects of a scrofulous diathesis, holds scrofula not to be the cause, but the cachectic appearance of the patients a result of the

local joint affection, which he considers "to be an inflammatory softening of the epiphyses, and the result of the extravasation of blood, from rupture of blood vessels situated immediately beneath their projecting cartilages." He expresses his views in the following words perhaps more clearly than I have done, and of the truth of which I am convinced: "Now, with all due deference to the opinions of the Profession, I understand this subject of scrofula or 'white swelling' of joints in a very different light; and while I do not deny that the disease in question may and does occur in persons having a scrofulous diathesis, I shall prove to you that the scrofulous diathesis is simply an accidental accompaniment, and has no more to do with the development of the local disease within the joint than has the hæmorrhagic diathesis, nor, in fact, as much, since a peculiar form of hæmorrhage into the cancellous tissue of the epiphyses from violence in some form is almost invariably the origin of this so-called scrofulous disease, or 'white swelling.'"

Lecture XVI.—In the preceding lecture, having studied the anatomy and the diseases which may affect the knee-joint, with their causes and early symptoms, and the symptoms of chronic knee-joint disease, he enters upon the subject of treatment, dividing it into that appropriate for the earlier stages, and that to be employed when the disease has so developed that the case requires extension and counter-extension, operative interference, etc." The most important feature of the treatment of the earlier stages is *rest*, no matter what structures are involved. The safer plan of getting this, is to apply a posterior splint of sole-leather, felt, or some other material, well moulded or fitted to the limb; then hot or cold water, whichever is the more agreeable to the patient, freely and constantly applied. After the acute symptoms have disappeared, you may advise a liniment, the use of which will insure the patient giving the joint a liberal amount of hand-rubbing and passive motion. He describes a double India-rubber bag for making compression over the joint, and at the same time heat or cold, as proves the more grateful to the feelings of the patient. Continue this treatment until all the pain and tenderness have disappeared; after this use hand-rubbing freely, and if under this treatment the effused fluids within the

joint do not disappear, "aspirate" the joint, and thus free it from the contained effusion. In doing so, however, be careful not to admit air within the joint, as this is the only danger in "aspirating"; therefore, after withdrawing "aspirating needle," hermetically seal the opening made by it before allowing any, even the most limited, movement of the joint, or you will have air sucked into the cavity of the synovial sac." The author states he is not afraid of air getting into a joint, but he does fear air *imprisoned* within it. If upon puncturing the joint to remove effusion you find it has become purulent, do not leave the puncture, but enlarge it into a free incision, so there can be no possibility of contents of joint being pocketed. If you have reflex contractions, use extension and counter-extension to prevent them.

"Remember, then, in the first place, that *rest*, permanent rest of the tissues involved, is an essential part of the treatment. In addition to rest, *extension*, constantly and persistently employed until the patient is cured. Besides rest and extension, you want *compression;* but this must be employed after the two former, for compression of the joint, without first obtaining rest and extension, would aggravate the difficulty." If to the last quotation from the author could be added, remove the contained fluids or solids which may be involved in the disease, I should say, all the treatment of all varieties of joint diseases were here laid down very succinctly. Now he gives a description of his apparatus for making extension and counter-extension in these cases, which is, as far as my knowledge and experience extend, not only the simplest and most easily adjusted, but also the most efficacious. After its application, if the patient be young, he can go about without the use of crutches and breathe fresh air, but if an adult, he should have the additional aid. The use of this instrument must be continued until the patient is entirely well, being careful to remove it now and then and employ passive motion to prevent anchylosis.

Lecture XVII.—In the opening of this lecture he gives the rule: "The instrument must be worn until the joint is well; until concussion, produced by bringing the tibia and femur together, does not cause pain, and until pressure over the coronary ligaments is painless." After the removal of this instru-

ment, he advises as a protection to the joint the use of a posterior sole-leather splint moulded to the leg and kept in place by a suitable roller-bandage, or the use of Darrach's instrument for the same purpose, plus making extension and counter-extension. If you find anchylosis can not be avoided, the author advises placing the limb in a *straight* position; the old rule being to place the leg at a slight angle upon the thigh. He assigns this reason for his plan, "when anchylosed at this angle the solidification is very insecure, and is liable at some future date to give the patient trouble."

He here reports three cases of chronic knee-joint trouble, with their histories and treatment. In the second case he performed tenotomy and "brisement forcê" of the knee-joint, thereby straightening the limb, and with the object of preventing too great inflammatory action resulting from this treatment, he bandages the limb tightly after bringing it parallel with the opposite and sound limb "from the toes up to near the knee; a large sponge was placed in the popliteal space, and strips of adhesive plaster were applied over the sponge, and drawn *tightly* around the joint from the bandage below the knee to some six inches above it. The roller was then continued over the plaster and snugly applied to the whole thigh, a piece of sponge about two inches in length, and about the size of my forefinger having been first placed over the track of the femoral artery," the object being to partially cut off the supply of the blood to the joint, and thus prevent inflammation by partial starvation.

Lecture XVIII.—He now describes the operation of exsection of the knee-joint, as also Packard's apparatus for the after-treatment of exsection, with the manner of using it. He also treats of bursitis, its diagnosis and treatment, and concludes the lecture by speaking of necrosis of the lower extremity of the femur, its diagnosis and proper treatment.

Lecture XIX and XX.—The subjects of these lectures are: Anatomy of the hip-joint, pathology of hip-disease, etiology, and symptoms of its first stages and their treatment.

This affection may begin: First, as a synovitis. Second, it may begin in a rupture, partial or complete, of the ligamentum teres, thereby interfering with the nutrition of the

head of the femur. Third, it may begin from rupture of some of the minute blood-vessels which are situated in the bone just beneath the cartilage of incrustation. This may occur either upon the head of the femur or at some point in the acetabulum, and results from blows, jumping, or anything which may produce a sudden concussion of these articular surfaces." He then treats of these three pathological conditions in detail. The author does not believe this disease ever begins in the cartilages of the joint, for the reason that these structures contain neither blood-vessels nor nerves. Necrosis occurs *secondarily* in the cartilages, on account of the loss of nervous and vascular supply to the tissues upon which they depend for nutrition. Almost all surgical authorities agree, says the author, that morbus-coxarius is invariably the result of a contaminated constitution, or, in other words, that it is essentially strumous in its origin; but from the cases he has seen, he has been convinced that the cachectic condition so often seen is the *result* and not the *cause* of the disease; an additional fact is, the joint has been exsected when the patients have been apparently at the point of death, and after removal of the dead bone have become vigorous, strong persons. This is good evidence that the disease is not constitutional, and yet still another fact is, "that a large proportion of these cases occur in children, whilst the scrofulous condition is by no means so restricted." Of the small number, the author has kept a record of, viz: 365 cases: 221 were under the age of fifteen years, and 121 under the age of five years; and like results have been obtained by others who have collected statistics. He therefore asserts his belief that the disease is almost invariably due to a *traumatic* cause, and not dependent upon some constitutional taint. Of his 365 cases, as above given, *traumatic* cause was assigned by the patient or parent in 257, while in 108 the cause was recorded as unknown.

"Ordinarily three stages are described:

"1st. The stage of irritation or of limited motion, before the occurrence of effusion.

"2d. The stage of apparent lengthening or of effusion, the capsule of the joint remaining entire.

"3d. The stage of shortening or of ruptured capsule."

The author prefers "for the second and third stages to use the terms *effusion* and *rupture* rather than apparent lengthening and shortening, as the latter describes only a single feature of the deformity present in each stage, while the former designates an essential pathological change which underlies a group of symptoms." Under the head of symptoms of the first stage, he gives Mr. Barwell's explanation of the *knee pain* of hip-joint disease, viz: "It is produced (1) by direct irritation of the nerves passing in close contiguity to the joint. These are the obturator nerves, the sciatic, the gluteal, and perhaps the anterior crural. It is produced (2) in consequence of an obscure sympathy between the two ends of the bone, or even direct propagation of the inflammation from one to the other; and (3) by spasm of certain muscles." The examination of the patient is well described by the author with great minuteness, every point of which is highly essential for the diagnosis of this—in its first stage—disease of great obscurity; the symptoms of which are dropping of the nates of the affected side, lowering and flattening of gluteo-femoral crease, pain, tenderness, swelling, atrophy, and limited motion, all of which extend into the *second* stage, but with increased severity. For the sake of terseness and to contrast the symptoms of the *second* and *third* stages of this interesting and frequently-met-with disease, I shall copy, as given by the author, Bauer's table:

SECOND STAGE.	THIRD STAGE.
Limb (apparently) longer.	Limb shorter.
" abducted.	" adducted.
" everted.	" inverted.
" flexed in both joints.	" flexed in hip-joint only; may be flexed at knee-joint also, but not necessarily.
Foot touches ground with sole.	Foot touches with ball only.
Toes everted, as in fracture of neck.	Toes inverted, as in posterior-superior luxation.
Pelvis lowered on diseased side.	Pelvis raised.
" projected forward.	" projected backward.
" angle of inclination acute.	" angle of inclination almost right.
Nates low and flat.	Nates high and round.
Linea inter-nates inclined toward affected side.	Linea inter-nates deviates from affected side.
Pain most intense.	Pain greatly diminished.

The "change from the *second* to the *third* stage is *sudden* when there are no adhesions in the surrounding tissues, and when the opening in the capsule is large and allows of the rapid and total escape of its contents into the surrounding tissues. But if the rupture is very small, perhaps fissure-like, the fluid oozes out by slow degrees, consequently the change in the deformity will take place slowly." The author says he has seen the change occur in a single night, while in other cases it may require weeks for its completion. There are extreme cases in which this change does not occur at all, although the effusion has escaped from the joint. Those are the cases in which the head of the bone has broken through the acetabulum, and is firmly held in the opening, or those in which inflammatory adhesions, osteophytes, etc., have taken place between the bones comprising the joint, holding it in its false position even after the capsule is ruptured. The shortening of the *third* stage, the author states, is not due to luxation, and in confirmation of his assertion, says: "I have now performed exsection of the hip-joint fifty-nine times, and have found luxation in only one case—that of M. D. Field—and it was caused a few days previous to the operation by the nurse twisting his leg while getting out of bed; and if a careful inquiry in all cases of so-called spontaneous luxation were made, we shall find that they have occurred after the application of violence, more or less severe, and not as the result of unaided muscular contraction, according to Miller and other authors whom I have quoted."

The prognosis of hip-joint disease is favorable if treated early; otherwise unfavorable for the restoration of the perfect use of the limb.

Lecture XXI.—In this lecture the author discusses the scrofulous habit. As before stated, he considers the origin of hip disease to be most frequently *traumatic*, not scrofulous. However, as the condition of the patient becomes cachectic, he advises the proper treatment for that condition, which in fact would be proper if it were indeed scrofulous; but unless the local condition be remedied those general means employed for the scrofulous habit are unavailing. This lecture is well worthy of the attention of the reader as contrasting *now* and *then*.

The great question of the nature, prognosis and treatment is made prominent. I can testify that I have witnessed in many cases the course of treatment followed by Dr. Sayre, and I have also witnessed a treatment possibly in vogue somewhere yet, and certainly generally practiced a few years since by surgeons justly eminent. Any one who will read the work now under notice, and especially if he should have witnessed the treatment set forth, will recognize the vast improvement in this branch of surgical science over that treatment which relied on blisters, issues, moxa, actual cautery and confinement. And this was the only treatment applied to cases of this disease a few years since.

Now, "the local treatment which has grown into favor during the past few years, but which I have advocated earnestly for the past twenty-five years, depends upon the necessity of giving absolute rest and freedom from pressure of the parts involved in the disease, without materially interfering with the mobility of the joint." Bonnet's method, fixation without extension, has been the plan abroad. "Fixation with extension, I think, was first employed in 1825 by Dr. Harris, of Philadelphia." "To obtain, then, permanent *extension* of the joint without a damaging amount of confinement, or, in other words, *extension* in such a manner as to permit motion, becomes the problem to be solved by surgical ingenuity."

The author gives credit to Dr. Davis for having first invented an instrument for combining extension with motion, but claims to have made improvements and modifications of this instrument. Unquestionably the improvements referred to are of great importance, and his fame rests in some degree upon the invention and application of them. He fully explains the instrument devised by Dr. Davis, and his own improvements, and whoever attempts the treatment of morbus-coxarius should study this lecture. The Sayre hip-joint splint is simple but ingenious, and the mode of application easy, but any one who attempts to apply it for the first time will find some trouble, for the application of this instrument, as well as all other orthopedic appliances, requires experience, with a knowledge of the anatomy of the parts. Much of the discredit appertaining to

instruments of the kind is caused by their bungling application. I have seen myself examples of failure in these cases solely attributable to this fact. When the instrument is not accessible or applicable, other devices are explained, as Darrach's wheel-crutch, weights to the sole of the foot, a leading object being to keep the diseased ends of the bones separated.

Lecture XXII.—In the opening of this lecture the author recapitulates as tersely as possible the treatment of the three stages of morbus-coxarius, both local and general, practically applying his principles in the management of it by extracting cases from his note-book. He quotes from Professor Syme, who has asserted, if the acetabulum be *carious*, the patient must die. "Not only do we save their lives now by operation, but we also restore form and motion to the limb. It is now twenty years since I performed the first successful exsection of the hip-joint in this country; and at that time the operation was very severely censured by the entire Profession. But the numerous cases in which perfect success has been obtained have proved its feasibility, and it is now quite generally considered as justifiable. From this I now feel like making the prediction, that by the time the entire Profession has accepted it as a justifiable operation, surgeons will know sufficient concerning hip-joint disease and its treatment to render the operation entirely unnecessary; for a thorough knowledge of its pathology, etiology, and very earliest symptoms, will lead them to such an early recognition of the disease as will enable them to treat it in a manner that will obviate the necessity of exsection. At present, however, we are obliged to perform the operation in those cases where proper treatment in the earlier stages has been neglected."

For the past eleven years I have applied the principles in the treatment of this affection as taught me in his private practice by the author, and am more and more confirmed as to the truth and soundness of his teachings in reference to it, as opportunity presents for observation.

Lecture XXIII.—In this lecture the author turns our attention to the history of exsection for the relief of hip-joint disease, and asserts it lies within the present century. "The pos-

sibility of removal of the upper extremity of the femur was first suggested by Mr. Charles White in 1769; but the first surgeon to attempt the operation in morbus-coxarius was Schmalz, in 1816. In his case the head of the bone was found loose, and simply required removal. The cases of Sclitching, Hoffman, Batchelder, and Klinger were similar to that of Schmalz. In 1818, Anthony White performed his celebrated operation, which has generally been referred to as the first successful exsection of the head of the femur in morbus-coxarius." "In this country the operation attracted but little attention until I published my first case in the 'New York Journal of Medicine' for January, 1855. That was the first time the operation had been successful in this country."

After giving some other facts in the history of this operation, he details the steps in its accomplishment.

We would like to give the reader Dr. Sayre's description of the operation for the removal of the head of the femur, but it would occupy too much space. Nowhere are the several steps of this operation so well described. The following I condense as the steps of the operation:

1st. The proper incisions should be made down to the bone and through the periosteum, being sure that the latter is divided.

2d. A vertical or T-shaped incision is to be made through the periosteum over the trochanter-major, the first incision forming part of it.

3d. By the use of the periosteal elevator, complete separation of the periosteum is to be made until the digital fossa is reached, where the rotator muscles of the thigh are inserted. Here frequently the knife has to be used in attaining this object (owing to their strong attachments), avoiding any injury to the branch of the circumflex artery. After the periosteum has been completely elevated from the diseased bone and the bone removed, "a perfect sheath" of the periosteum should be found.

4th. When the bone has been exposed—and no more should be than what is designed to be removed—then it is divided with a *saw*, and not with the pliers, as is usually recommended. The use of the saw obviates the "slivering" of the bone.

5th. The trochanter-major should always be removed. If the caries extends below the point to which the incision has been made, the periosteum should be further removed until healthy bone is reached.

6th. If the acetabulum be involved in the disease, great care should be exercised in the removal of such parts of it, so as to avoid injuring the internal periosteum, which lies in contact almost with the rectum.

7th. Thoroughly cleanse all of the old sinuses from dead bone and false membrane which may line them.

8th. Wash well the wound and "fill it with Peruvian balsam and stuff it with oakum," stitching the extremities of the wound, leaving a direct opening to the acetabulum.

9th. Never plug the wound with cotton or lint.

10th. Suitable bandages are then to be applied and the patient placed in a wire cuirass. The sound as well as the diseased limb must be extended, and the muscles are to be divided, if necessary, to accomplish such extension.

With proper care of the wounds made and due attention to passive motion, a new joint may be formed, and the patient enabled to use the limb and walk with ease. At the end of about six weeks or two months the wire cuirass can be removed and the short or long splint applied. Cases of results under this treatment are set forth as an appendix to this chapter, which show a grand step in conservative surgery. Not a great while ago these cases were all consigned to the grave by the most experienced surgeons of all countries.

Lecture XXIV.—The lecturer here takes up the subject of the diseases which simulate hip disease—namely, sacro-iliac disease; disease of the knee; caries of the ilium or ischium; periostitis of the parts adjacent to the hip-joint, particularly of the great trochanter. More rarely it is confounded with psoas abscess associated with Pott's disease; inguinal abscess; inflammation of the psoas magnus and iliacus internus muscles; congenital malformation of the pelvis, commonly known as congenital dislocation; paralysis of the lower extremities, and injuries to the hip. Then is given the anatomy of the sacro-iliac junction, according to Gray, citing cases of the above-named dis-

eases, their peculiar symptoms, the manner of contra-distinguishing between them and hip disease, with their appropriate treatment, all of which is well worth the careful study of every surgeon, because many diseases considered incurable have been cured; the great principle underlying it all being to remove the cause and institute treatment and mechanical appliance analogous in principle to that referred to in the last lecture under review.

Lecture XXV.—The subject of this lecture is Pott's disease. The author regards its origin as traumatic rather than constitutional or scrofulous. He relies principally upon mechanical treatment, so as to give the parts affected rest. Any portion of the spinal column may be the seat of this affection, and, of course, the forms of the mechanical apparatus have to be varied, so as to meet the purposes in the case. He employs Dr. Taylor's apparatus for supporting the spine, and when the cervical vertebræ are the seat of the trouble, he uses Dr. Davis' head support; but many patients are unable to purchase such costly appliances, and when, on this account or any other, these can not be obtained, he uses the plaster of Paris or sodium silicate corset as a substitute. I have employed these measures myself in a number of instances, and always with satisfaction, and relief to my patients. When these cases are seen in their earlier stage, the treatment should be absolute rest in the recumbent position upon an air or water-bed, when possible, and antiphlogistic means used to subdue the local inflammation, which is always present. After the acute inflammatory symptoms have disappeared, then the mechanical means of support are to be brought into use.

Lecture XXVI. is devoted to rotary-lateral curvature of the spine. In this deformity there is no osseous disease, but it is dependent upon abnormal muscular action. Here the treatment consists in removing the muscular abnormity. Various devices are resorted to for this purpose; thus, if the muscular trouble be paralysis of a certain set, they must be stimulated to the performance of their normal function; or, if it arises from "contractured" muscles, they must be stretched or divided with the tenotome; and if any appliances are made, they must not conflict with the normal muscular action.

Lecture XXVII.—Here the author enters upon the subject of anchylosis. He cites two cases; one in which both hips, one knee, and both ankles were apparently anchylosed as the result of rheumatic inflammation; another of hip-joint disease, in which anchylosis occurred in joints of sound limbs as the result of long confinement in a fixed apparatus. In this case there had been no inflammatory action in any of the joints, except the diseased hip; nor had the patient suffered from, or complained of, pain in any of his other joints. A very important lesson is taught by this latter case, showing the necessity for occasional passive motions being instituted in sound joints, when, from necessity in the treatment by rest of diseased joints, healthy ones are confined. Here is repeated the precaution, when anchylosis of the leg is unavoidable or desirable, he advises the *straight* position, for reasons before assigned. Having, upon examination, discovered a case to be fibrous, and not osseous, the author says it is best, under an anæsthetic, by manual force, combined with tenotomy or myotomy of subcutaneous section of the fascia, if necessary, to proceed to immediate restoration of the joint to its normal position; objecting to the old method of *gradual extension*, on account of the length of time required and the great pain produced by its application. Of course, this manual force or "brisement forcê" should never be employed until all the traces of the joint disease have subsided. His rules for the subsequent treatment of the joint after brisement forcê are based upon the general principles of surgery, together with the use of roller bandage and strapping of the joint in a special manner to "partially starve" it, thus preventing too high inflammatory action occurring; and then placing it in an immovable splint of some description. After some days passive motion is instituted—at first very gentle and limited, and gradually increased. He then details several cases of anchylosis of hip and knee-joints, with his treatment of them.

Lecture XXVIII. treats of bony anchylosis in several of the important joints. The surgical history is given, and describes the best modes of operative procedures. The literature of the subject is well condensed in this lecture.

Lecture XXIX.—In this the author treats of the various de-

formities not described in the previous lectures. The first of which is "the deformity accompanying facial paralysis, which consists in a drawing of the mouth toward the unaffected side; the patient is unable to whistle or laugh properly; the angle of the mouth upon the affected side is lower than normal, and the eye upon the same side can be only incompletely closed." It not infrequently becomes permanent. "Many cases, as far as the cheek is concerned, can be relieved by bending a hook upon the end of a piece of silver wire, and hooking it into the angle of the mouth, and then fastening the other extremity by bending it around the ear, as suggested by Dr. Detmold." If the ear should not yield sufficiently, use a piece of elastic with hooks placed on each end. The principle is the approximation of the origin and insertion of all of the muscles involved.

He then treats of the following subjects and their appropriate treatment, both systemic and mechanical, torticollis and wrist-drop. Under the latter subject, in speaking of "lead poisoning" being a fruitful source of this affection, I quote the following in defence of the author: "The use of Laird's Bloom of Youth as a cosmetic is a very fruitful source of lead-poisoning among women. I have had three most distressing cases of this character under my own observation, which were caused by the use of this single article; and yet the manufacturer has dared to use my name upon his advertisements, recommending it as a safe and reliable cosmetic!"

In concluding this imperfect notice, I may be allowed to recommend these lectures of the author to all those having a taste for the practice of this special department of surgery. The doctrines taught have guided me for the last ten years in the treating of deformities, and the appearance of this volume is most gratifying to me, for it refreshes in my mind lessons which have proved invaluable.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Pollution of Rivers.—The beauties of the river Wye, if they do not belong to the British tourist, are, at any rate, a source of pleasure to all English lovers of river scenery at home. The fact, therefore, that the cathedral city of Hereford, with a population of nearly 20,000 inhabitants, still empties its sewage into this river without any attempt at purification, or even subsidence, has a far more than local interest. We must, indeed, confess to some difficulty in repressing a feeling of satisfaction from the knowledge that the residents of the city of Hereford are discovering, in an unpleasant manner, that this simple but savage method of sewage disposal has become an intolerable nuisance to themselves, and a source of the gravest danger to their health. This discovery is more likely to lead to reform than æsthetic considerations for the lovers of river scenery, or sympathy for the health of down-river residents, or the success of pisciculture. With regard to the sewer outlets, the medical officer of health has no hesitation in pronouncing that they are "endangering the health of the inhabitants," the flow of the river being insufficient (fortunately for those living below Hereford) to carry away the soil. At a spot where a considerable increase of deaths has taken place, the medical officer of health found "a bank of partially broken up feculent and other decomposing vegetable and animal matter."—*Lancet.*

Action for Malpractice.—An action for malpractice was tried last week at the Leeds assizes, which is interesting from the side issues on which it turned. A year and a half ago, a miner was severely crushed and injured by the fall upon him of part of the roof of the colliery in which he worked. The surgeon to the colliery, Mr. Walter S. Simpson, saw him shortly afterwards, and found abundant superficial injury, but discovered no fracture or dislocation. Three weeks after, the man found his way into the Leeds Infirmary, where an unreduced dislocation of the hip was discovered and reduced by Mr. Wheelhouse. The

patient went to work again a few weeks later, but remained lame, and was assured by a Dr. Wade, of Pontefract, that the dislocation was still unreduced—an opinion which that gentleman expressed in court. All the members of the surgical staff of the Leeds Infirmary were prepared to give evidence that the dislocation had been reduced, and that the head of the femur was still in its place. On such a point the opinion of either Mr. Hey, Mr. Wheelhouse, Mr. Teale, or Mr. Jessop may be taken as conclusive, and it may be assumed that the dislocation was reduced, as asserted. The fact was undisputed that the dislocation was overlooked by Mr. Simpson. For such an oversight, some excuse was offered, and we think with reason. A dislocation of the hip into the sciatic notch is by no means easy to detect when the whole side and the limb are swollen by the effects of direct violence, and it can not be held as a grave imputation on the skill of the surgeon that the exact injury escaped notice at the moment. The patient, it appeared, refused to follow the injunctions given as to rest. Instead of keeping in bed, he persisted in dressing, and walked about, keeping the limb in a sling, and so the limb escaped further examination. The oversight was admitted; the point argued was whether the patient's crippled state was to be ascribed directly to the delay in the reduction of the dislocation, and whether the delay had not prevented the reduction altogether. Dr. Wade's evidence in support of the latter opinion was too weak to have any weight, and the case broke down on the expression of an opinion that the delay of three weeks would not and did not interfere with successful reduction, and would not have interfered with the use of the limb had the patient been careful in its employment.—*Lancet.*

Treatment of Lichen Tropicus, or Prickly Heat.—This troublesome affection is only too well known to those who have had any personal experience of tropical climates. Surgeon-Major Dr. J. G. French, of the Indian medical service, in a contribution to the "Indian Medical Gazette," after combating the recently advanced pathology as to the seat of the disease being a hyperæmic sweat-duct papule, says that we can cure

prickly heat in three or four days by the application of a solution of sulphate of copper. This should be of the strength of about ten grains to the ounce of water, and the solution should be applied daily or oftener by means of a camel-hair brush, or bit of sponge tied on the end of a stick. It is best applied after the morning bath, when the skin has been well rubbed with the towel, and it must be allowed to dry on the skin before dressing. Dr. French states that he has used this application for over thirteen years, and, when regularly and properly applied, he has never known it to fail.—*Lancet.*

The Antiseptic Methods.—Lister's method is obtaining increasing attention both in the British Isles and abroad, though it can not be said that it is as yet universally adopted. At least, judging from London, it is found that in some hospitals faith is weaker than in others, and there are certain groups of surgeons who adhere to the old system. Germany has adopted Lister's method with enthusiasm, but in France they are very lukewarm. For some time past a method bearing some analogy to Lister's has been warmly advocated by M. Alphonse Guérin, who is as anxious as the Edinburgh professor to exclude air in its ordinary condition from wounds. To attain his end, M. Guérin, as is well known, dresses wounds with thick layers of cotton-wool; and he believes, with Professor Tyndall, that the wadding arrests the germs and allows pure air to reach the denuded surface. The layer is left a long time, and when removed exposes a healthily granulating wound. This practice has been carried on by himself and others for several years with great success, but has not as yet been generally adopted. Now it so happens that the author has in the Academy of Medicine a colleague who is his namesake. His Christian name, however, is Jules. M. Jules Guérin is well known in the surgical world as the inventor of the subcutaneous method in various operations. His great anxiety to exclude the air led him to introduce what he calls his pneumatic method. This consists in placing a stump, after amputation, into a bag from which the air has been drawn, and here again we are told of successful cases. In all the three methods to which we have alluded, sup-

puration is either very slight or does not occur at all. Here, however, arises a question of priority. The elder Guérin (he is between seventy and eighty) taxes the younger with having simply copied him and being quite innocent of a discovery. The younger, in a speech before the Academy, retorts sharply, and shows that his system has nothing to do with pneumatic occlusion, and that he considers the air, when properly purified, a very wholesome agent. The question of dressing wounds is, no doubt, a difficult one; but it is plain that much has been gained within the last few years. All the three inventors wish to exclude germs—Mr. Lister by means of powerful antiseptic fluids and careful occlusion, M. Guérin (senior) by excluding the air altogether, and M. Guérin (junior) by entangling the germs in his cotton-wool layer; and last (and perhaps not least) come those who trust to the open dressing of wounds, to cleanliness, rest, and proper attention to the general health of the patient.—*Lancet.*

The Fisher Case.—We give a brief résumé of the facts of this case, which many of our readers will recognize as the one recently referred to where death occurred during the administration of ether. The patient, a young school-teacher, had suffered for two years or more from dysmenorrhœa, and had been treated by a number of physicians without relief. A few months since she placed herself under the care of Dr. Sinclair, who recommended an incision of the os with the hope of thus effectually relieving a painful and obstinate affection. The operation was postponed until the summer vacation, when the patient would be able to give a proper amount of time to convalescence. Accordingly, early in July, the patient was seen again, but was advised to wait until the approaching catamenia had passed. They having ceased on the 15th, the operation was performed at the private hospital of Mrs. Ware on the 19th. Ether was administered, and the patient was placed in Sims' position, the ether towel now being intrusted to a female attendant. Dr. Vogel, who assisted Dr. Sinclair at the operation, felt the pulse soon after the operation had been begun, and found that it had ceased to beat. Breathing had ceased

also, and in spite of all efforts made, the patient could not be resuscitated.

The first information which the Profession and the public received of this case was that an inquest had been ordered for the purpose of determining, not whether a correct return had been made as to the cause of death, but whether an attempt had been made to procure abortion. We need hardly say that the professional public attached no weight to the rumors and suspicions mysteriously circulated at that time. We shall refer, therefore, to but one or two points in the testimony given at the inquest. The autopsy, performed by Dr. Treadwell, showed, in addition to Bright's disease, a chronic pleurisy on one side of the chest, and an engorgement of the pulmonary artery, indicating that death resulted from asphyxia. The testimony on the condition of the ovaries and uterus pointing to a miscarriage at some time previous to the operation, we refer to below. The jury found "that the said Clara T. Fisher came to her death on Wednesday, July 19, 1876, at about between the hours of 11 and 12 o'clock A. M., at No. 4 Ferdinand street, in Boston, by reason of suffocation, caused by the administration of sulphuric ether for a simple surgical operation, under the direction of Dr. A. D. Sinclair, assisted by Dr. Frederick W. Vogel; and the jury further find that, in their opinion, there was a lack of caution in said administration of ether, in not allowing a due quantity of atmospheric air to pass to the lungs of the patient during etherization; and the jury are also of the opinion that there was a too hasty abandonment of the means for the resuscitation of the patient, and that the diseased condition of the patient may have contributed, in some slight degree, to her death."

Although it may be said that the jury could hardly arrive at any other opinion from the testimony as reported, excepting, perhaps, that referring to means taken for resuscitation, we feel sure that the professional verdict would exculpate a physician of Dr. Sinclair's high standing from any want of ordinary care in handling a case of this sort. The great superiority of ether over chloroform in point of safety has, we think, engendered among many physicians a certain want of appreciation of the

amount of care necessary to be employed in the use of this, as indeed of any, powerful agent. A feeling of too great security, followed by the inevitable calamity, frequently places the blame where it is undeserved. It is not the individual or the agent, but custom, which is at fault. With precautions such as should always be taken, and which, undoubtedly, a large number of physicians think unnecessary, the warning signals will always be displayed in ample time to avert impending danger.—*Boston Med. and Surg. Jour.*

A Treaties on the Diseases of the Nervous System. By William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System in the Medical Department of the University of New York, etc.—It is largely composed of a reputed personal experience, which, to say the least, seems incredible. For instance six hundred and twenty-two cases of cerebral congestion are classified, and other diseases in numbers as large, proportionate to the frequency of their occurrence. There is a certainty of diagnosis and treatment of the various forms of cerebral disease which fascinates the inexperienced and conveys the impression that medicine has attained the position of an exact science, in which the cause and effect are as easily traced within the body as in the chemical laboratory.

The classification of the disease is in accordance with the divisions of the mind, and hence we have perceptional, intellectual, emotional insanity, etc. This classification has not even the merit of novelty, being merely a revamping of Arnold, and is utterly impracticable in clinical practice. In diagnosis of cerebral disease, Dr. Hammond differs from the best and nearly all other authorities in giving prominence to investigations with the ophthalmoscope. In their hands they have proved to be of comparatively little value. The examinations of Prof. Henry D. Noyes of a large number of cases in the asylum at Utica, and the observations of other competent ophthalmologists, entirely refute the positive assertions of the author.

The theories regarding anæmia and hyperæmia are put forth with the assurance of their being well-established facts, and in too many other instances dogmatism takes the place of demon-

stration. Distinctions impossible in our view, and certainly not warranted by the present state of medical science are drawn between anæmia of the posterior and of the antero-lateral columns of the spinal cord, and so-called cases are cited in illustration. The application of the term "spinal irritation" to the former state will not receive the sanction of observers or writers of experience.

The book has some good qualities, and contains an accumulation of observations upon nervous diseases, which will prove of interest and benefit to the reader, who may not be misled by its assertiveness, its many exaggerations and misstatements of principles, as well as fanciful views. The extraordinary claim to originality which Dr. Hammond makes is, in a work of this character, simply amusing, but will hardly deceive any one who is even moderately well read in medical literature, and indeed may give rise to the suggestion that a little less originality in opinion, and more deference to the views of the leading minds in the Profession, might have increased its value.—*American Journal of Insanity.*

Ethics.—The following is the rule of the Royal College of Physicians of London relating to consultations of physicians: "If two or more physicians, fellows, or members of the College be called in consultation, they shall confer together with the utmost forbearance, and no one of them shall prescribe, or even suggest, in the presence of the patient, or the patient's attendants, any opinion as to what ought to be done, before the method of treatment has been determined by the consultation of himself and his colleague; and the physician first called to a patient shall, unless he decline doing so, write the prescription for the medicines agreed upon, and shall sign the initials of the physician or physicians called in consultation, he placing his own initials the last. If any difference of opinion should arise, the greatest moderation and forbearance shall be observed, and the fact of such difference of opinion shall be communicated to the patient or attendants by the physician who was first in attendance, in order that it may distress the patient and his friends as little as possible."—*British Med. Jour.*

Removal of 121 ounces of Pus from the Left Pleura of a Child aged Three Years; with Satisfactory Results. By J. de Burgh Griffith, M. B.—Early in March last I was called to see a little boy three years of age, who had been ill for some time. I found the child extremely emaciated, and presenting a haggard, aged, and worn-out appearance. I observed that the abdomen was greatly enlarged, and also that the heart was beating under the right nipple; the breathing was also labored and hurried. Percussion of the left side gave dull sounds from apex to base in front and behind, and bulging of intercostal spaces. The diagnosis was not very difficult. I suggested to the parents the removal of the fluid as the last though but slender chance of saving his life, and to this procedure his parents readily assented. Accordingly my late principal and myself undertook the operation, and with a Dieulafoy's aspirator removed thirty ounces of healthy pus; but, as the child began to show symptoms of sinking, we were compelled to suspend the operation before the cavity was quite empty. The heart traveled across the chest from the right side almost to its normal position. The little patient was put to bed, had a long and refreshing sleep, and awoke in the morning with a great desire for food.

The child continued to improve from day to day, sleeping and eating well, and having no cough. However, in about a week, he began to show signs of declining. The heart was again in the right side, or, rather, the wrong side, and his breathing was distressed. On April 2d we again tapped his chest, and this time removed 40 ounces, completely removing all pus, which was still quite healthy, and about the consistency of thick cream. The respiratory sounds over the affected side were fairly pronounced. Although somewhat harsh and tubular, the chest upon percussion was very resonant, doubtless from the abscence of the lung from the parietes of the chest, the lung in all probability not having expanded after the long-continued pressure against the spine and mediastinum.

After this second operation the patient improved very rapidly, putting on flesh, and sleeping well. He took cod-liver oil and quinine, which seemed to agree with him very well.

On April 8th we thought it advisable to tap the chest again, and on this occasion took off 20½ ounces also of healthy pus. He still continued to improve, although after about ten days he seemed to decline and refuse food, was restless at night, and had some cough. The affected side was again quite dull, and the heart was displaced.

On April 21st we performed paracentesis for the fourth time, and on this occasion only got away 2½ ounces, which was mixed with a blood-stained frothy matter; and, as the fluid suddenly stopped flowing into the cylinder, I should say the lung was expanded, and had probably been struck by the point of the needle, and this opinion was easily confirmed by auscultation, which showed that the lung had greatly expanded; the respiratory sounds were more vesicular. However, no bad consequences followed this operation, and the child went on in every respect very well till May 10th, when the operation was again undertaken, and 28 ounces evacuated with complete success; and the little boy is now (May 25th) so well that he can walk about by himself, and seems quite to enjoy life again.—*Lancet.*

It is marvellous that the drainage tube was not inserted after the first operation, and all this suffering prevented.—E. S. G.

Annual Meetings of the British Medical Association.—We are indebted to the General Secretary for the following list of towns at which the annual meetings have been held since the foundation of the Association: 1833, Worcester; 1834, Birmingham; 1835, Oxford; 1836, Manchester; 1837, Cheltenham; 1838, Bath; 1839, Liverpool; 1840, Southampton; 1841, York; 1842, Exeter; 1843, Leeds; 1844, Northampton; 1845, Sheffield; 1846, Norwich; 1847, Derby; 1848, Taunton; 1849, Worcester; 1850, Hull; 1851, Brighton; 1852, Oxford; 1853, Swansea; 1854, Manchester; 1855, York; 1856, Birmingham; 1857, Nottingham; 1858, Edinburgh; 1859, Liverpool; 1860, Torquay; 1861, Canterbury; 1862, London; 1863, Bristol; 1864, Cambridge; 1865, Leamington; 1866, Chester; 1867, Dublin; 1868, Oxford; 1869, Leeds; 1870, Newcastle-on-Tyne; 1871, Plymouth; 1872, Birmingham; 1873, London; 1874, Norwich; 1875, Edinburgh; 1876, Sheffield.—*Brit. Med. Jour.*

MEDICAL NEWS.

'Nulla dies sine linea."

Two more homœopathic teachers created for the University of Michigan——Dr. Brown-Séquard went by request with the Emperor of Brazil on his continental tour.——The "Archives of Clinical Surgery" is the title of a new journal just established in New York; subscription $4 annually; edited by Dr. E. J. Birmingham.——The Medical Faculty of the University of Paris have repudiated the Concours system.——The "Oregon Medical Journal" is the title of the last; it is published at Salem, Oregon.——The plague in Mesopotamia is at end.——Dr. Vincent Sartori, the Pope's surgeon, is dead. His successor is Dr. Cecorelli.——An incombustible paper, made from asbestos, is the last chemical novelty.——Dr. R. D. Arnold, of Savannah, Ga., died July 19th.——Dr. Nichols, Superintendent of the Government Hospital for the insane, has been most honorably acquitted of the charges made against him by a political committee.——Dr. Gurdon Buck, of New York, is better, but his friends fear that his renal disease is incurable.——The best chloral hydrate is now re-sublimed; its impurities are thus destroyed.——The British Medical Association met this year at Sheffield. Of several thousand members not more than 450 were present. There were good papers read, but most of the time was spent in junketing and examining the Sheffield hardware manufactories.——Lindsay & Blakiston have issued the second American edition of Robert's Practice of Medicine; a superior work——The "Courier-Journal," of this city, announces eleven deaths from yellow fever at Savannah in one day.——*The Madrid* correspondent of the "Times" telegraphs that the heat in Spain is fearful, and exceeds any recorded since the year 1800. In Madrid there are hundreds of persons sleeping on the roofs of houses and in balconies. In Seville people sleep in the open streets; the temperature is 101° in shady rooms. Madrid is wholly deserted, and its streets are silent. A further telegram adds that the heat in Andalusia is increasing, and forty field laborers have died at Seville of sun-stroke or heat-apoplexy.—*Med. Times and Gaz.*——*Patent Medicines.*—The

Government stamp duty on patent medicines, in the year ending March 31, amounted to £123,136 9s. 10½d.—*Ibid.*——*The Employment of Bibulous Paper.*—At a recent meeting of the New York Medical Association, Dr. G. H. Fox gave an account of the utility of bibulous paper, of which there are two varieties; the French, which is used by dentists in absorbing the saliva while operating; and the Japanese. The former will absorb at least five times its weight in water, and although this may not exceed what good lint will do, yet it acts much more rapidly. The Japanese, when moistened, does not reduce to a pulp, like the other, but it can be rolled into cylinders, and passed into sinuses, the urethra, etc., being capable also of easy removal. Dr. Fox regarded the French paper as a cheap and convenient substitute for lint, cotton or absorbent powders. In bleeding surfaces it would form an excellent substitute for sponges. Its greatest use has been in the treatment of venereal sores, and it has been of service in eczema of the breast from nursing. When rolled into pellets, it forms an admirable means for bringing fluid caustic substances in exact contact with the surfaces to be cauterized—*e. g.*, for the application of nitric acid to the surface of a chancroid. This spongy paper readily absorbs the discharge of sores with which it is brought in contact, and if often renewed keeps the sore and surrounding parts clean without washing. It may be medicated with carbolic acid, peroxide of iron, and other substances.—*N. Y. Med. Rec.*——*The Earl of Beaconsfield.*—"Youth is a blunder; manhood a struggle; old age a regret." The author of these words, written many years ago, has lived to give them a practical denial, so far, at all events, as is implied in the last sentence of the epigram. Mr. Disraeli is now in his seventy-third year, and has just accepted the highest honor that a Commoner can receive from his Sovereign.—*London Lancet.*——*Chloralization.*—An Austrian surgeon, M. Linhart, has communicated to Baron Larrey an account of an interesting case, in which the anæsthesia and muscular relaxation necessary for the reduction of a dislocation of the shoulder were obtained by the intravenous injection of chloral. The patient had inhaled chloroform on two previous occasions, but each time the excitement

under the chloroform had been very intense, and much vomiting followed. It was therefore decided to chloralize him. The solution of chloral employed was neutralized by a few drops of carbonate of soda. A gold needle was used, and the utmost care taken to insure freedom from extraneous particles. The injection was made into the left arm. At the end of fourteen minutes seven grammes of chloral had been absorbed, and anæsthesia was complete. There was not the least reflex movement. The reduction of the dislocation was effected with extreme facility. Absolute anæsthesia continued for half an hour; he was then awaked, and he drank, and then slept for several hours. On recovering there was no nausea or vomiting. Slight defective sensibility continued for twenty-four hours. The vein into which the chloral had been injected showed no trace of irritation or of coägulation.—*London Lancet.*——*The ex-Empress Charlotte.*—Nine years ago Maximilian, Emperor of Mexico, closed his brief reign in the courtyard of Queretaro, where he was shot by command of the late President Juarez, and ever since his widow, the ex-Empress Charlotte, has been a prey to acute melancholia—the paroxysms of which, however, were at first followed by intervals of partial return to reason. In these she was allowed to amuse herself—if amusement be the word for an occupation which turned upon the deepest tragedy—in writing the experiences of her husband and herself in their few months' sojourn in Mexico. This she has long abandoned, and in the château of Laeken, where she is under strict medical surveillance, she has relapsed into confirmed dementia, which her physicians have given up all hope of curing. As in similar cases, she recurs to the predilections of childhood, one of which was a passion for flowers, and, Ophelia-like, she spends most of her time over them, feeding as they do her once lively but now diseased imagination. Their attraction for her was touchingly manifested the other day. Eluding the watch of her attendants, she had fled from the castle, but when overtaken it was found impossible to induce her to return, except by the use of means which would certainly have proved hurtful. One of her physicians bethought himself of her morbid affection for flowers, and by strewing them from time to time

before her she was gradually lured on her way back to the château, where a closer surveillance has since been placed over her.—*Lancet.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The Pollution of Rivers.—The medical journals of America labor under one great disadvantage, viz.: the difficulty of effecting necessary reformations of general hygienic abuses. Almost every American journal, when dealing with such subjects, has its influence chiefly limited or assigned to the State in which it is published. The "New York Medical Journal" and the "New York Medical Record" have next to no influence whatever on the legislative Bodies of Kentucky, while the "Richmond and Louisville Medical Journal" and the "American Medical Weekly" have, in common with other journals published in the West and South, even less influence with the legislative Assemblies of Massachusetts or Pennsylvania. And wherever a medical journal is published in this country, it will be found that its influence in the reformation of abuses injurious to the Public is confined almost exclusively to the small geographical area of one or a few States. From the very nature of a confederated government, many States forming in reality one great Power (*e pluribus unum*), it is unavoidable that State publications should influence, as a rule, more than State authorities, and that the National Government should usually remain uninfluenced by forces not centric or national in character.

It is due to American medical journals that this should be borne in mind by the professional Public; for it is to the causes mentioned, undoubtedly, that the medical journals of this country, many of them ably conducted, are able to remove or lessen with so much difficulty, and so exceptionally, abuses well appreciated and forcibly presented in their pages. Of course reference is here made to journals of worthy aspirations and worthy management, and not to those medical sheets whose pages are consecutively devoted either to coarse ribaldry and abortive wit, or to falsehood and ignoble efforts to wound and injure

competitors. Such sheets achieve notoriety, though a most unenviable one, but their influence is justly confined to those who prefer ribaldry to instruction; and the unfair and dishonest criticism of others to scientific improvement and useful discussion. These are the difficulties with which American medical journals have to contend.

With European journals it is entirely different. The "London Lancet" is prized throughout the British Kingdom, and its influence is as great in Manchester or Leeds as it is in London or Liverpool. The same may be said of other worthy European journals; "no pent-up Utica" confines their powers, and the petty geographical lines which limit journal usefulness and influence in the United States, exist there only exceptionally.

With all of these differences and difficulties, it is yet at least the duty of the American Medical Press to try and accomplish for the Public at large a proporticnate share of that great good which, for the European Public, is accomplished by its medical journals. Few who are familiar with the history of the European Medical Press can fail to have perceived the vast good which it has accomplished for the people among whom its issues are disseminated. Hospital reforms; jail and work-house improvements; the improved construction of public buildings, and the buildings and tenements for the poor; improved comforts in railroad, river and marine travel; improved methods of lighting, heating, and ventilating private and public dwellings; better administration in penal and medical institutions; these and many other equally conspicuous results have been directly due to the industry and power of the European Medical Press; until even a greater improvement than all has been achieved, the elevation of the Medical Profession in the general respect and confidence of the Public. Indeed, the medical man in Europe is now knighted and adorned and honored by most of the governments there; and it is but recently that Mr. Gladstone stated in a remarkable address before a mixed audience in London, that the Medical Profession had in the last decade done more than any other to ennoble and dignify itself, and had a brighter future before it than had any other of the learned Professions. Indeed, at the last meeting of the British Medical Association,

Sieveking, in his excellent address, gravely proposes, for the consideration of that representative Body, the urging upon the British Government of the establishment of a "Ministry of Health and Science;" and there is no improbability that medicine and medical science will yet represent one of the Portfolios of the British Government; becoming a coördinate power in the governmental administration of one of the greatest Nations of the world. Is not the suggestion of Sieveking well worthy of adoption by the American Government?

Among the many subjects of great interest to the foreign Press during the last ten years has been that of the pollution of the river and water courses. It is well known that many of these have become so polluted by the tons of foul matter poured into them by the sewers of large cities, towns, villages, and manufactories on their borders, that navigation is seriously obstructed; the fish are destroyed; the cattle poisoned; and the water made so filthy as not only to be no longer fit for drinking or domestic purposes, but to be a source of direct disease; a danger to the thousands who are brought in either direct or indirect relations with it. Indeed, to such an extent has this evil grown in England, that public attention has not only been generally directed to it, but extended popular alarm has been conspicuously developed. The powerful hand of Government has been invoked, and not only have scientific Commissions demonstrated that the evils and dangers alleged to exist are really greater than was supposed, but laws applicable to the whole Kingdom have been proposed and designed to put an end to this threatening and almost fatal evil. A Bill for this purpose has already been passed by the British House of Commons, and has been once successfully read before the House of Lords. There is every reason for believing that it will soon become a law, and there can be no question, if this great blessing be achieved, that to the Medical Press of England belongs almost the sole praise for the grand work accomplished. Statesmen can well appreciate and eulogize the Medical Profession, when they see to that profession belongs so often the almost exclusive credit for the gigantic hygienic movements and results that have been in late years achieved; results that bring im-

proved health, comfort and happiness in their train; lessening disease; lessening the fatality of disease; and giving to society and labor thousands who would have been consigned otherwise to the alms-house or to the grave. Well may the European magnates of most of the European powers praise and honor the Medical Profession.

What has the American Medical Profession to say and to do in regard to this subject of the pollution of harbors, rivers and water courses? Though its country is as yet but a baby among the Nations, no educated or observant man has failed to see that the waters of American rivers have already become seriously poisoned; that this stupendous evil is a growing evil; and that the present condition is fraught with dangers increasing and undeniable. Boston, New York, Philadelphia, Brooklyn, Baltimore, are all feeling these dangers and manifesting them in their mortuary tables and cemeteries. Avoidable deaths from these causes occur daily, and many who should be ornaments of society or contributing to its support, are, from the reasons indicated, the victims of premature and avoidable deaths. The evil increases, and will soon be felt in other cities and in the towns and villages. Who will move in this matter? Of course every one knows that it is the Medical Profession which must effect the change, if the change is ever effected. Will it do this? No one doubts this. It needs only to be aroused. Is it not time that thought and action were taken in the matter? The condition of affairs is bad enough now. Every new sewer pouring its foul contents into any stream makes this worse; and every new sewer thus emptied is but the result of additional work to be finally lost; necessitating new work to be constructed. Health and economy, therefore, demand prompt action.

The first step necessary is to create a correct popular opinion. Here every physician's voice is a power, and if used, must soon imbue the mind of the Public with the important information, new to them, that the pollution of rivers by sewage is a great danger and an increasing evil to the people. With this conviction there will come inevitably the popular demand for the correction of this dangerous abuse, and the institution of a safe and proper disposition of the waste matter of populous centres.

What this should be, scientific engineering is busily investigating, and the result will, of course, be easily achieved. But first of all, the public mind must be educated, and to accomplish this, every physician should be prepared and anxious to speak forcibly and intelligibly. It is a question that the Medical Press and Medical Profession of America should actively agitate; and save the noble streams of this country from foul and fatal pollution.

It may be said that only the physicians of large and sewered cities are interested in this matter, and that to the village and country practitioner it is a matter of no practical importance. Many may say this, but surely not those who term their profession noble; for selfishness and self-interest are only possible when all that is noble has departed. A really noble profession, and those who really represent it, will never refuse the active support of a movement because of reasons purely selfish in character. All physicians, therefore, who deserve the name, will lend their influence in behalf of a movement so important and necessary.

Legislation and legislation alone can save the rivers of America from becoming a peril, rather than a blessing. Every physician influences one or more legislators. To stay the pollution of American water courses is a great and noble work, and one well worthy of the thought and action of the American Medical Profession.

Medical Department of the University of Michigan.—The "Detroit Review of Pharmacy" has published an extract from some secular paper, in which Dr. Jones, Dean of the Homœopathic College at Ann Arbor, denounces as a "falsehood" the statement made by the "Richmond and Louisville Medical Journal," that the homœopathic students slunk away last spring from their examination for the degree of Doctor of Medicine. Dr. Jones states that these students *all* preferred to attend a third course, and did not seek to graduate after attending only two courses. Whether this statement be false or whether that made by the "Richmond and Louisville Medical Journal" be true, the Public can decide. One would not expect a fishy story

to emanate from Ann Arbor, but no mischievous "old salt" ever returned from a cruise among the leviathans and perpetrated upon innocent "landlubbers" a fiction which could bear comparison with this. *All* the second-course homœopathic students objected to taking their degree; they preferred to take instead—another course!!! a statement so absurd that no one, unless afflicted with a homœopathic supply of brains, could believe it. "The homœopathic students feared to make the issue, and slunk away from the ordeal." The "Detroit Review" so persistently publishes only one-sided statements in regard to Ann Arbor, that it is not probable it will give space to this.

As to the charge of Dr. Jones, that the regular students at Ann Arbor were so disorderly as to necessitate the presence of a police officer in the class-rooms, this Journal has authority for saying that there never was a more dastardly falsehood. At the clinics and at the chemical lectures, attended by mixed classes, students (as they do elsewhere) often left the rooms, creating confusion and disorder, and a police officer was stationed *outside* to put a stop to this general nuisance, *by excluding all but members of the class.* That the old Faculty at Ann Arbor ever required or used a policeman in their lecture-rooms, is a falsehood of the basest character. It is somewhat surprising that the editors of the "Detroit Review" will give currency to statements which every one acquainted, even superficially, with the University of Michigan must know to be false and disreputable.

The Present and the Past.—The Louisville "Courier-Journal" of September 2d contains a remarkable article in regard to the assumed preëminence of the Medical Department of the University of Louisville. It states that the former Faculties of that Institution furnish the authors for four important papers to be read before the International Medical Congress; these gentlemen being the elder Flint; Eve; Yandell, senior; and Parvin; while Gross is to be President of the Congress. This is all true; but the sad question arises, how many such authors are furnished by the present Faculty? There are indeed many differences between "the Present and the Past."

RICHMOND AND LOUISVILLE

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—*The Present State of the Argument in favor of a Contagious Diseases Act.* By E. T. EASLEY, A. M., M. D., Little Rock, Ark.

No body of men have labored more zealously or been more persistently ignored than those who have urged an effort to limit the spread of venereal diseases by enactments looking to the supervision of prostitution. Conspicuous for their learning, the earnestness of their convictions, and their devotion to scientific progress, they have been resisted and thwarted at every step. Fired upon front and rear and enfiladed, they have again and again been beaten back in every struggle to advance. So determined and unreasonable has been this opposition that it may be safely said, that nowhere has a contagious diseases act been put fairly to the test. The clergy and law-makers, confessedly incompetent to deal with the problem, have extended none, or a cheerless encouragement to those who have proposed a remedy. In a few instances only have they granted a tardy consent to the experiment. Acton, whose recent death was so sad a loss, devoted the most earnest work of the last years of his useful life to the investigation, and never ceased to insist on the large benefits to be secured by the compulsory examination and isolation of those diseased. Dr. Gross, by his inaugural address to the surgical section of the American Medical Association in 1874, has more prominently associated his name with

the movement than any other American, and if the late address of my illustrious friend, Dr. Sims, had nothing else to redeem it from oblivion, it ought to live because in it he has taken such high ground on this very subject.

Many of us have watched the progress of this discussion with much solicitude, and have kept silent under almost a protest from our convictions of what is right. I am sure I but express a large public sentiment, both professional and lay, when I say the time has come to deal with the issue more decidedly than has yet been done. This necessity is upon us, and in view of the magnitude of the evil to be abated, may not be evaded. That syphilitic diseases are enormously on the increase, and that, too, in their worst forms, does not need debate or illustration; the proposition will be admitted by all. Shall we, when our profession boasts so many recent triumphs, submit to the humiliating confession that nothing can be accomplished in this behalf? No subterfuge or argument can do away with the unpleasant facts involved; but the question of limiting the spread of contagious venereal diseases will intrude itself upon us incessantly, and in all candor we may well ask those who object to what has been proposed to offer us a remedy of their own. This is just what they have failed to do, and so the agitation in this country has been carried on most unprofitably.

The language of Dr. Kennard, of St. Louis,* in reference to the registration law of that city, presents a melancholy picture of the blindness of its opponents, and fitly portrays the great results that might have been achieved, and the difficulties that were encountered. "The law was a very excellent one. We were about to stamp out syphilis, and we had a quiet city. I have examined about 11,000 women, and ought to know something about the subject, and to have some data on which to base my opinions, and I repeat that we can stamp out syphilis; that we did stamp it out. The women supported the work themselves by weekly contributions, but through the fanaticism of old women, preachers, and I am sorry to say a few doctors, they succeeded finally in inducing our Legislature to abolish the law. And what has been the consequence? At this time in St. Louis

* Trans. Amer. Med. Association, 1875, p. 238.

you can not walk half a dozen blocks without being invited to come in. Such scenes as occur to-day in St. Louis would not have been tolerated during the existence of this law."

An antagonism as resolute has met this vanguard of reformers not only with us but in Great Britain and on the continent. And now, how can the women who concerned themselves so injudiciously in London and in St. Louis, the ministers who should have helped us, but who, instead, have launched their philippics against every *scheme to protect society* or redeem the Magdalene, how, it is demanded, can these be called philanthropists in any true sense of the appellation? Heaven forbid that we should encourage a depreciation of either class. There is no room in our hearts for any such feeling. If their impulses are strong and often imprudent, we know also that their convictions are honest. What we object to is the superficial character of their conclusions and the inadequate information upon which they determine an issue of such dimensions. But these people must be taught that there is a great wrong, a widespread source of misery; nay, the problem of the age to be met, and that if they are not prepared to grapple with this problem effectually, they ought at least to be silent and cease to indulge in innocent resolutions or pernicious declamation.

An abolition leader was accustomed to say that that party never got effectively to work until it had educated a generation to hate slavery. Now, if the onus is upon us of educating a generation to perceive the necessity of supervising prostitution with a view to arresting the spread of a loathsome malady, it is time we were about the work, and that in earnest. It is apprehended that we have not yet reached that point in the discussion when the question shall become one of details in regard to the proposed enactment, and a great deal of needless anxiety is exhibited and wasted as to its provisions. Of course, when we descend to the minutiæ of any plan that may be suggested, many inconveniences and difficulties will be encountered; but it is safe to assert that as our experience of the operation of the law enlarges, these will be found surmountable. At any rate, it is not the part of wisdom to enlist our energies against troubles which are imaginary or far in the future; but our plain

duty is, in a straightforward and direct way, to do the best we can with our present surroundings. What is required of medical men now is to acquit themselves of their responsibility in this regard, and to show in a practical way that they mean to do something. Let the move but be made, and that with a resolution to succeed, and we may with confidence look to time to correct the errors incident to the beginning of all important enterprises.

Those who are not inclined to do anything, who prefer that matters should go on in the fearful channels they now pursue, and who oppose us on the very threshhold of our designs, say among other things, with a great show of being plausible, that no system of surveillance that may be devised can be made to include all prostitutes, and that a large number will constantly escape the most rigid registration. It must be confessed that there is some truth in a statement of this sort. It is not probable that any system of registration, however inflexibly maintained, will ever be so perfect as to comprehend every offending woman, but it is almost certain that in time those who avoided registration would be a very insignificant number. But the argument will lose nothing if we grant all that is claimed in this objection; for we may answer these gentlemen pertinently and conclusively by asking, if we can not do all that we wish, especially in the beginning, is it a reason why we should do nothing? On the contrary, ought not the fact to impress us more sensibly with the magnitude of the evil and the still greater consequence to result from its neglect? "Is not half a loaf better than no bread," was an interrogatory propounded last year in Louisville by Professor Gross, and one which was made in substance by Mr. Acton long ago.

We are often told there is a large class of clandestine prostitutes—shop-girls, bar-maids, beer-jerkers, milliners, and kept women, who are and who are likely to remain under any plan of regulation altogether beyond the reach of inspection, and that these persons propagate most syphilis. Frequently as it is made, there is more than one fallacy implied in a statement of this sort. In the first place, it is not true that these women disseminate a larger percentage of disease, or that they are

affected with its worst forms to a greater extent than those who avowedly follow their infamous vocation. The fact is applicable to the clandestine prostitution of the continent, and the idea has been derived from its statistics, but fails in America simply because we have no corresponding class. It is to be remembered that these reports are mostly of relative value, and are to be taken as evidence of a beneficent influence on those who have been subjected to inspection, and as indicating the nature of the mischief when left to itself to work out its own malign courses. Numerically, I am satisfied that they have been much overestimated. They are not to be compared, in this respect, to that vast host of street-walkers and undisguised harlots toward whom we desire to direct the benign influence of a systematic inspection. Again, the secrecy with which their operations are carried on very much diminishes their liability to contract disease and to infect others of the transient or general community, and the men infected by them are for the most part able to obtain competent medical aid, so that the mischief done by these women is comparatively small. They are usually able to provide attention for themselves when they become sufferers. On the continent, a clandestine prostitute is understood to be a woman who lives by her person and has the address to withdraw herself from special police supervision and periodical examinations.

It may be stated, on the authority of Jaennel and other observers, that registration uniformily diminishes the number of clandestine prostitutes. Many who abandon their ranks report, some of them voluntarily, for enrollment, whilst others, through fear of the police, forsake a life of shame. These women are a part, but a very small part, of the out-lying stragglers of this great camp of iniquity. It is the amelioration of the condition of the main body with which we must first be concerned, and when these come to learn their real status, that they have not ceased to be the objects of the care of enlightened government; and more than all, that they can not be permitted to scatter wide the seeds of disease and death unhindered, the others will be still further restricted in their immoral acts, or surrender at discretion to a judicious supervision.

It is the common, open, notorious prostitute upon whom we wish to lay our hands and bring to bear the strong arm of the law, and when this is done, undoubtedly we shall be able to modify or get rid of the larger and most dangerous part of the mischief. The lower we go down in the social scale, the more harmful does syphilis become; for it is among the indigent classes that negligence, uncleanliness, inadequate food and clothing, and other causes favorable to the development of its worst forms are most rife. In a word, the sanitary condition of these people is always a degraded one. They show but little resistance to disease of any kind, and so with them syphilis soon invades the deeper structures or takes on a phagædenic and rapidly destructive character. Clandestine prostitution often assumes a different, if not higher, level than that of mere bargain and sale. The promptings of desire or affection enter not seldom as elements of the crime. But the great mass of these unfortunate women receive no pleasure from sexual intercourse, and fail to share the gratification they afford at a price. With them it is a question of subsistence, of bread, of keeping the gaunt wolf of starvation at bay, and no law could be acceptable that while it healed her maladies, did not also suggest a legitimate means by which she might live, if she was inclined to abandon her disreputable course, and make an effort to retrace her steps toward respectability.

It is folly, the worst sort of folly, that which exhausts itself on trifles to talk about who can or should be controlled, when the fact is, we are not controlling anybody, and vice and disease go on, for all our fuss, as they always have done, and unrestrained. Let us rather go to work, and subject to inspection that large number readily accessible, trusting, as we securely may, that enlarged experience will extend the sphere of our usefulness. Every one knows that the partial recognition of prostitution now in vogue by periodical descents on its haunts is the merest farce, so far as any restraining influence is concerned, and worse than a farce to the blackmailed unfortunates. Surely, such puerile and tyrannical recourses on the part of the authorities are only less iniquitous than the evil against which they are directed.

That a contagious diseases law is practicable, has been sufficiently demonstrated, and we have reason to believe that much more may be accomplished under its operation than has hitherto been done. But let it not be supposed that we have underestimated the difficulties inherent to the subject; it is confessed that these are very great. Many men are, I am satisfied, too hopeful of immediate results. Dr. Sims, for instance, is doubtless far too sanguine. Syphilis can not be quarantined out of existence, any more than can the swift-winged winds or the great gulf-stream. It is not one thing that is to be done, but many. A system is to be inaugurated of vast ramifications and elaborate details. I know no undertaking that will require more profound thought in the inception, or protracted labor in the execution. The early fruits of the movement will hardly be commensurate with the expense of time, patience, and material resources employed; but as sure as they are well directed and persistent, a rich reward will ultimately crown our exertions. Time will be on this subject as on many others where important interests are at stake—the great teacher—nothing can supply its operation, and nothing make void its developments. The divinities of to-day may be the false gods of to-morrow, and what is now denounced as innovation and heresy, we may yet live to see lauded high on the hills of everlasting truth. To that agency, then, which corrects so many errors, which explains so many motives misconstrued, we may in all charity and patience consign the task of putting all men right upon this subject. If we mistake not very much the animus of the age, it will not be very long before government will cease to think it beneath its dignity to care so much for the welfare of its subjects as to throw restraints around the most terribly infectious disease that afflicts them.

The question of limiting the spread of syphilis should command as much the attention of the educated physician as ventilation, disinfection, sewerage, or any other sanitary measures. That government and the philanthropist should be interested in the ravages of syphilis as they are in the progress of small-pox, typhoid and yellow fevers, cholera, and other such diseases is equally clear. State Boards of Health betray great anxiety

in regard to thorough and systematic vaccination, and yet fail to take cognizance of the fact that vast numbers perish from a disorder as preventable and infinitely more intractable than small-pox. I ask, is this reasonable; is it just? The answer is, that it is neither just to the State, whose wealth consists in a vigorous population, nor to the individual, to whom health is not only happiness, but the means of obtaining money and subsistence. In every civilized country on the globe, lunatics are withdrawn from the community and treated at the charge of the State, as much for the protection of the public, as through motives of benevolence to the afflicted. Upon identically the same principle it is claimed that syphilitics should be isolated. It may appear at first sight a little singular that more has not been attained toward reducing the number of vicious women and the consequent spread of the disease, when so much has been attempted by the clergy and good people of both sexes. The very fact that little indeed has been done is the most striking commentary possible on the inadequacy of this sort of work. We have had midnight and noonday missions; institutions designed for reformatories have been established; tracts have been widely distributed, and sermons preached at the Five Points in New York, at Lafayette street in Louisville, at Smoky Row in Nashville, and other disreputable localities in the large cities. Now and then a soiled dove has been lifted up from the mire, her feet placed on the granite, and if her reclamation is permanent and has any significance, she represents one less in the cohorts of sin; one less as a probable nidus of disease abstracted from the seething mass.

This is all very well and commendable as far as it goes, but the misfortune is that it does not go far enough. They must have but an imperfect conception of the gigantic proportions of the evil to be mitigated who hope in any such way to effect anything of substantial import. That a certain amount of good is wrought by these means is undoubtedly true, and if people are willing to give their time and money for the sake of obtaining good results, however small, not a word will be said to dissuade them or in any way to retard their efforts, with which I am in full sympathy. I can not, however, allow my sympathy

to blind my judgment, and I repeat that midnight meetings and such measures are unlikely to be productive of satisfactory results, because they can not effectually reach the large body of prostitutes to whose benefit the efforts of the philanthropist should be directed, and the results are, after all, but microscopical in comparison with the labor and money bestowed.

The reason seems to be obvious. "A gigantic evil," says Mr. Acton, "can not be removed by private, irregular, and unsystematic efforts. A little tinkering here and there may here and there produce a little good, but the advantage obtained is accidental, partial, and transitory." Hereafter, the historian of our times may say truly of our paroxysmal and desultory devices:

> "The ways
> Were filled with rapine, here and there a deed
> Of prowess done, redressed a random wrong."

We have been shooting at a venture, "fishing with lines when we ought to have been using nets," leaving to scattered, good-meaning individuals, with a poor idea of its magnitude, work which should constitute the highest duty, and demand the concentrated action of the State. What we want now, above all, is a well-considered, combined, and systematic effort in the execution of a definite and generally acceptable plan of procedure.

If we are really in earnest in our desires to do good in this direction, we can not do better than begin with a fair apprehension of the fixed and irrepressible nature of the evil to be encountered. From the earliest ages of the world, from a period of time so remote that truly the "memory of man runneth not to the contrary," the daughters of shame have dwelt among men, their frightful traffic has been sustained and its appalling consequences have cursed the fairest parts of the earth. The camp and court, rich and poor, the peasant and the priest, and crowned heads have all supplied their victims to Circe's nefarious blandishments. Ever and anon the finer feelings and the better natures of good men have protested, and they have risen up to make headway against the deepening, widening sea of corruption. They have said, we will banish the pros-

titutes; the women who sell their bodies and make society rotten with their iniquity shall not dwell among us. And what has been the result? It is briefly told; alas! that it should be written, the remedy has proven more harmful than the disease for which it was applied. The enormous crimes of seduction, illegitimacy, criminal abortion, and infanticide have followed in the wake of every effort to suppress prostitution. It is a melancholy and unpalatable fact, but one which those who entertain Arcadian notions on the subject may as well understand at once, that such enterprises present only an unbroken record of failure. The city of Berlin offers one of the most conspicuous among many examples of the utter futility of suppressive measures. This great capital has, on as many as three occasions (in 1717, in 1796, and 1845) since the Reformation, been cleansed of prostitutes; but has, on each occasion, fallen a prey to desertion of infants, adultery, clandestine prostitution, and other disasters more terrible than those for which relief was sought. Of the last attempt, we are informed "the licensed houses (twenty-six) were closed despite the remonstrances of the police department, and their three hundred inhabitants banished, as well as all other females, without ostensible means of support. But unnatural offenses, self-abuse, secret prostitution, and illegitimate births became so common, and syphilis so much more than ever severe and frequent that General von Wrangel was induced to make a forcible appeal on behalf of the army's health against the quasi improved order of things. The number of females who entered the public hospital had risen from 627 and 761 to 835, and that of the males from 711 in the year 1845 to 979 in the year 1848."

It is impossible to believe, then, that we can do away with prostitution altogether. It is no transitory evil, and it is worse than foolish to shut our eyes to facts. Accepting the proposition, which surely does not need further illustration, that the evil must always exist, it can yet be materially lessened, and its consequences, so far as they relate to the public health, vastly diminished. We can not, it must be conceded, coërce people into leading virtuous lives, but we can compel them to submit to inspection, to isolation and care when diseased, and so pro-

tect humanity from the ravages of their unclean disorders. Although prostitution can not be repressed absolutely, it is a thing to be restrained within certain bounds and subjected to a wholesome control and supervision. By a contagious diseases act, we say to the women in effect, "you can not be prevented from following this sad career which you have chosen; we would force you to abstain from vice, but we can not; but we can and will take care that your shameful lives shall no longer work injury to the health of others or outrage public decency. You have no right, by any possible construction, to inflict a loathsome and deadly malady on the unhappy victims of your allurements, and you shall not."

So we come around again to the question, what is to be done with this abomination, injurious, utterly sinful and imperishable? Let us devote a little more time to a consideration of the actual attitude in which the question is presented. It is manifest enough from what has been said, and from what all men know to be true, that the ills engendered by prostitution are two-fold, moral and physical. If the moral mischiefs only were to be considered, or alone followed in its train, the whole subject would be placed beyond the domain of legislation, for, as I have already stated, people can not be made honest or virtuous by any act of the General Government, State or Municipal authority, any more than their chancres can be healed by reading tracts, or their hungry bellies satisfied with listening to sermons. In other words, the moral results of the evil must be met in one way, in a way appropriate to them, the physical consequences on the other hand can only be treated by physical measures. We are in thorough accord with all rational means for elevating the depraved moral status of this unfortunate class, and no plan of registration would be tolerated that did not have such a design prominently in view; for every reason of expediency and right, let those pious people who strive to lift Aspasia up to a purer atmosphere, a better life, be encouraged, for they are, in many cases, the salt of the earth in a corrupt age. What the exigency of the matter demands, however, is coöperative work.

Our Profession can and will bring to the task a large number

of experts—its best talent—men of pure hearts, devotion to scientific progress and enthusiasm for the enterprise. If they are but sustained by those from whom they have a right to expect help, incalculable good will be accomplished. The educated, arduous, and self-denying efforts, without adequate compensation or approval, displayed by our Profession to prevent the deterioration of the race through the spread of syphilis entitle us to require of government increased facilities for dealing with it. It is a foul blot upon the intelligence and Christianity of the century that we are considering; it can not be left to itself, severely let alone, with any prospect of its growing less disfiguring. On the contrary, its constant tendency is downward, and to diminish it or render more tolerable its horrid features, requires all the redeeming and healing influences that can be brought to bear upon it. I need not pause to present the unhappy career of the prostitute, her short life of fictitious gaiety and real misery, and her shameful, hopeless death; this has been done by Parent-Duchatelet, Alphonse Esquiros, Jaennel and others, in language so graphic that the picture is painfully vivid. It is enough to say that through every degradation of soul and body from St. James to St. Giles, her course downward is rapid and almost universally taken. Nor are we at present particularly concerned with the causes of prostitution, although unquestionably they may be much reduced. These causes are multitudinous, and may be conveniently divided into artificial, local and individual causes, which create a lawless demand, and which furnish an infamous supply among them. Not to dwell on this head, let us mention extreme poverty, indolence, vicious inclinations, indisposition or inability, real or supposed, for marriage, and the heinous offense seduction. To this black list may be added the bad effect of what Dr. E. S. Gaillard has characterized, with appropriate severity, the hotel plan of living, adopted so largely by families who ought to have homes.* Now these are the points that mostly chal-

* This veteran journalist and accomplished lecturer has, to my knowledge, made occasion annually for years to direct the attention of the Profession and large classes of students to the mischievous tendency of the American habit of congregating families in hotels and boarding-houses. The salutary and restraining influences of home-life are not only lost to the young, but indolence, early dissipation and immoral associations are the results of a system so pernicious.

lenge the efforts of the philanthropist and churchman, in which their efforts seconding a judicious surveillance may reap rich fruits, not indeed by a discussion of the issues in the abstract, or alone by discourses against the enormity of the sin, but by substantial improvements in the sanitary condition and moral associates of the young of the lower orders. It is a patent fact, and can not be denied, that prostitution is to many of these women only a transition state; repulsive and dishonorable as is their vocation, they do not, all of them, go down to the grave in their base career. On the contrary, vast numbers of them after having tasted the bitter pleasures of a shameful life emerge from the depths into a better walk, a quasi-respectability. They frequently become the wives of tradesmen and men of means and position in society. In the interests of the race, the State and the general community, it is an obvious duty to preserve sound the bodies of as many of them as we may.

Supervision, the belief has been expressed, will lessen the number of both open and clandestine prostitutes, and for this there is an obvious reason. However low a woman may have sunk, her downward steps were not all made at once; though rapid, they were gradual; however lost, she was once pure, at any rate there was a time when she had not actually fallen. Now many girls would be deterred from entering upon such a career if they knew that it would subject them to registration and render them conspicuous to the whole community. This is true of women on the verge of an abandoned life, while as to the hardened offender she regards the measure as the case may be, with favor or with indifference. She has seldom been known to oppose any decided objection to the law, and so far from wishing to evade it, oftener than otherwise, she soon recognizes its advantages. That women will be really or in their own estimation more debased by registration and regular inspection, is "a dagger of the mind" which may frighten some, but with those most familiar with the habits of thought and life of the prostitute it can have little effect. Surely if the women realize that from being utterly ignored they have come to be the objects of government and individual solicitude, their self-respect must

improve, and while her physical welfare is promoted, frequent examinations will present constantly the salutary contrast between virtue and vice, between a life of respectability and one in every way degraded. I honestly believe that such would be the result, and it is but serious trifling to assert that women, whose bodies are free to all the world and who are so lost to decency as to consort with numbers of men the same night, would be scandalized by the manipulations of the surgeon. I hope we will not hear anything more, even from the most democratic, about the infringement of individual liberty by compulsory examination. "They talk, sir," says Dr. Guthrie, "of the liberty of the subject. Let no man confound the liberty of the subject with license and licentiousness, and I hold that the worst enemy of liberty is he who does so confound them, and after all, what is this liberty but wanton license? It is not freedom but lawless indulgence." The principle which justifies and renders necessary such an enactment is one upon which all good government is founded; it is that for the common good every individual must be restricted to a certain extent of personal freedom; that is, that he must give up for the social benefit a moiety of liberty to do just as he pleases. No doctrine can be clearer than that the State has the right, and ought to exercise it, of preventing the individual from inflicting disease and death on his fellow-citizen. I have already alluded to the visionary character of the idea that prostitution will ever be extirpated. If there are those who will labor to this end, we bid them God speed; but until that good hour arrives we ask not to be deterred from limiting and mitigating its appalling consequences.

It has been urged by those who oppose any measures of surveillance that registration and regular examination offer a fictitious security to the indulgence of unlawful intercourse, in short, that it is placing a premium on crime. Nobody who has ever read it can forget the eloquent and indignant manner in which this charge was repelled by Mr. Acton, when made by Mr. Simon (in his report as Medical Officer of the Privy Council) one of the grounds of his objection to the extension of the contagious diseases act to the civil population in England. Whilst the percentage of syphilis has uniformly grown less, it is not true,

as assumed in this proposition, that prostitution has increased under the operation of these acts on the continent. This argument almost reached an absurdity when Dr. Andrews gravely informed us,* by way of illustrating the insufficiency of the French laws, that of four young men who crossed the Atlantic with him, one to his "own certain knowledge" contracted syphilis in Paris. It does seem that this is a very large deduction from small premises, and it is hoped the gentleman does not wish us to believe that his gay young friends were really in more danger of disease on account of an effort having been made to keep the women clean. The truth is, and the lesson of such examples this, the laws are not perfect, and much labor may yet be bestowed on them to advantage. If they who perpetrated fornication were the only ones to suffer, there might be some force in this reasoning, and formal moralists might be so indifferent to the pains of the erring as to withhold all prophylaxis. But in this case, to an extraordinary extent, are the "sins of the fathers visited upon the children," and the number of the innocent who are sorely afflicted is almost incredible. I am constrained to present the following table, which exhibits better than any language can do the startling but indisputable fact that the greatest mortality exists among children under one year of age. It was issued by the Registrar-General.

Deaths of Children under Five Years of Age from Syphilis in the Year 1868.

AGE.	ENGLAND AND WALES.	LONDON.
Under one year	1,364	361
One and under two years	82	21
Two and under three years	19	2
Three and under four years	6	2
Four and under five years	1	...
Total under five years	1,472	386

Verily the slaughter of the innocents is still going on, and by a foe still more inexorable than the old king who pursued them from the garrets of the great city to the caves of the wilderness. Shall they not be spared? Do they deserve no mercy at our hands?

* Transactions American Medical Association, 1875, page 235.

Let it not be supposed by even the most unsophisticated that syphilis comes as a retribution for sin. Does not he who has grown hoary in iniquity, whose life is a history of licentiousness, escape, whilst the stripling, still the subject of maternal anxiety, falls, and in his first offense contracts disease to become a mass of rottenness? Every one who has visited large hospitals knows that it is so. Does not the countryman who has never before wandered from the marriage bed of his rural home, overtaken in liquor it may be, fall a prey to the harlot's seductions, and take to his honest wife the most detestable of all maladies? Yet we are told that sin brings in this life a large share of its own punishment, and that in this instance the retribution is syphilis. Ah! my masters take not that "flattering unction to your souls" as an excuse for refusing to join an enterprise to relieve the ills of our poor humanity, or to evade an answer to the old question still thundering in the ears of the philanthropist—"am I my brother's keeper?" Let us here make a proper distinction. It is not concubinage, promiscuous fornication, adultery, or any form of illicit intercourse which necessarily propagates syphilis, but it is connection (and too often the commerce is lawful) with the infected. Before proceeding, let the views of the Rev. Mr. Maurice, who has long opposed the extension of the Contagious Diseases Act in London, be presented. "The argument respecting retribution for sin which has had most weight with ministers is an untenable one. I believe that I should be guilty of a pious fraud if I told any young man that he would inevitably incur the punishment if he yielded to the temptation. I believe that I should be injuring his conscience, both by the falsehood and by setting before him a low motive for abstinence, and I know not where the application of such a maxim could stop. Is gout not to be treated medically when it is proved to be the result of gluttony, or madness when it can be traced directly to drunkenness. Strike at the cause by all the moral influences you can use, but the effects ought to come under the cognizance of the physician."

The objections which have been urged, it may be remarked, apply for the most part particularly to the systems of regulation suggested, and not to the principle involved. That principle

concerns not the government or State alone, but every separate household in the community, for the disorder in its visitations is unmindful of caste or social position, and if it made such distinction anywhere the barrier could not stand under institutions so very democratic, where heredity is unknown, and society's classifications intermix, amalgamate and lose their distinctive features in every new generation. Why, madam, your fair boy, the darling object of your care, whose virtuous mind you think can entertain no impure thought, will go away from you to be more sadly afflicted than he who fell among thieves on the way to Jericho; and as in that case so in this, the Priest and Levite will "go by on the other side." Can it be wrong that we call on the Profession by every motive of personal and public interest to join a crusade to disenthrall the fallen and to cleanse their foul persons? We have a good cause, many special pleas to present as its advocates, and may well appeal to society that it has a direct interest in reclaiming and in caring for the health of the prostitute. The commonwealth's interest in it is this: "That there is never one among all these whose partners in vice may not some day be the husbands of other women and fathers of American children, never one of them but may herself when the shadow is past become the wife of a citizen and the mother of his offspring, that multitudes of them are mothers before they become prostitutes, and other multitudes become mothers during their evil career. If the race of the people is of no concern to the State, then has the State no interest in arresting its vitiation. But if this concern and this interest be admitted, then arises the necessity for depriving prostitution not only of its moral but of its physical venom also."

As before intimated, it is not the purpose of this paper to enter into a discussion of details in reference to a plan of supervision. These require much thought and ought to be thoroughly digested when the time for action shall have arrived. Many good and competent men will then be found ready to submit the outlines of an enactment and mode of procedure as nearly perfect as with our present experience human wisdom could contrive. But the essential features of such a system may properly

be mentioned. It must be based upon the idea that prostitution is imperishable as well as injurious and utterly abominable. And in the first place it must premise that nothing can be of any avail in arresting the dissemination of syphilis except the rigid, systematic and absolute segregation of the infected. The earliest and most obvious thing to be done is to render those diseased powerless to contaminate others, and this can only be accomplished by isolation and cure. Begin to subtract the diseased from the mass of the licentious, and syphilis must diminish; there can be no other rational conclusion. In proportion as the measure becomes general, to that extent will we have entered upon the way, the only true way, of stamping out the malady. No plan of treating these women at their resorts or as out-patients will answer. While they are getting well they must be positively denied the deadly privilege of propagating their diseases. All will be impressed by what has been so forcibly said of the out-patient system of the London Hospitals. "Here you see a woman, who, patched up by voluntary charity in the morning, knows no other way; nay, whose only possible resource to get her necessary food, or bed at night, is to sally forth into the streets. The ministers of charity eased her pain this morning. They dressed her sores and gave her drugs. So they will again next Thursday. She may be worse then, or she may have made a little progress in spite of her drinking and her fornication, but in a month she will be no nearer soundness than had she been taken care of by the State within the walls of the hospital for one week, and within that month what a scourge upon society will the surgeons not have kept afoot by their exertions?"* No language could describe with more emphasis the extent of the mischief or the inadequacy of the measures which have been brought to bear upon it.

I hold that the Government is bound for its own sake, for that of the afflicted, and in the interests of the exposed community, to provide for the segregation and care of its pauper syphilitics, and that the provision should be as liberal as the demand, for it is pressing and extensive; further, that it is as

* Acton on Prostitution, London edition, 1870, p. 248.

much the duty of government to protect from preventable diseases the meanest of its subjects as it is to secure their civil and religious freedom within proper limitation, and to bestow upon the poor the medical care which the wealthy are able to obtain for themselves. The health of each individual is the great item in his productive capital, and of course an essential part of the gross national capital. If the citizen is sick, he not only fails to maintain himself, but becomes an element to swell the effect of unproductive consumption. It was an observation of the celebrated Junius, that "the ruin or prosperity of a State depends so much upon the administration of its government, that to be acquainted with the merit of a ministry, we need only observe the condition of the people."

While, as has been shown, we can not do otherwise than entrust to the moral sense of the individual participation in or abstinence from unlawful commerce, we can not delegate to private charity the alleviation of its concomitant evils. These people can not be successfully addressed in masses, the appeal must be to the personal conscience and accountability, and compulsory restriction on unsanitary conduct must be placed on the individual offender. We have also undertaken to show that no voluntary system of dealing with prostitution will answer; however unpleasant to our sensibilities, the fact of its existence and permanency must be accepted as it is presented, and then we are to labor to restrict its bounds, to limit its evils, and to relieve its deplorable results. A great deal is said of toleration, of recognition, of licensing; women are shocked when the subject is approached, and say how naughty it all is, and good-meaning men hold up their hands in pious horror, and refuse to admit any but the Eutopian idea of suppression, and so we waste time in quibbling over terms and in sentiment, while work that we ought to be about is left undone. It is said that government is bound to admit the existence of the evil only to the extent and for the purpose of making an effort to suppress it. I have tried to explain rationally and from the sad examples of those nations that have made the trial the utter hopelessness of such an undertaking. And why after all this dread of recognition by the State? Why should gov-

ernment fail to perceive a state of affairs known of all men, open and notorious? Why is the State required to be blind to what everybody sees? Is the power that alone can correct a mischief that all lament alone to refuse recognition? Individual effort misdirected and unorganized can never cure her diseases or reform the prostitute. The mass of evil will not be rendered less odious than it now is by such interference, and combined, concentrated effort approved and directed by authority can only, it is firmly believed, stay the frightful march of the deadly disorder. Let us not bandy words about what we shall call our system. Call it recognition, licensing, legalizing, what you will, so that we only go to work in pursuance of some feasible, rational and systematic plan, backed by authority, to execute its provisions. Our opponents may characterize our operations as suits them; in this case at least there is little in a name, and it will not do to be alarmed at shadows. It is the principle for which we are contending, the great principle that government is obligated in this instance, as in others, to protect society from the effects of the wrong-doing of the individual. Applied in the present discussion, the principle is that the State must recognize the evil just as it is, and provide measures of sanitary control. Those measures, to be of any avail, must contemplate as to the syphilitic early detection, compulsory isolation, detention and cure.

I have elsewhere shown* that the negro race is rapidly perishing by specific diseases, and that the still-births and infant mortality from this source are appalling. The facts in their history prove that prior to the war, on account of the restrictions opposed to their licentiousness, the early detection and prompt treatment of their diseases, venereal disorders were almost unknown among them. No argument could more persuasively declare the benefits to be derived from a humane and intelligent supervision. The unprecedented effort of the present party in power to elevate the social status of these people is a matter of history. The blood and treasure of the nation have flowed freely in their behalf, and it is fair to say that no people

*American Medical Weekly, July 31, 1875. Art. "The Sanitary Condition of the Negro."

were ever the objects of so much government solicitude. These efforts included the disastrous policy of making at once the vast stride from slavery to full-fledged citizenship. They have been peculiarly the "wards of the nation," yet they are more indolent, licentious and diseased than ever before, and mar the sanitary records of all the large Southern cities. Why, it may be asked, are they now ignored in the respect which most especially concerns their very existence as a race? Let the government, we have a right to insist in the interests of common humanity, be true to itself and consistent. The power which freed the slave, made him ostensibly the social peer of his master, is still pledged to make him its especial care. Let it then heal his physical unsoundness, restrain his abandoned modes of life, and save, as it well may, scores of his offspring from death. A pseudo-philanthropy does not become the times. We have learned to distinguish oily gammon from the real utilitarian. The duty of government is dictated by a necessity as unbending as that which declares the responsibility of the subject.

No one denies that the enactments already in force across the water are very far from perfect, but should we not learn wisdom from their deficiencies, improve upon their shortcomings rather than complain and do nothing at all? The partial failure (if it be admitted) of the venereal diseases act to accomplish, in some localities, all that was desired does not affect the principle at stake, or render less urgent the necessity for continued action. In this connection it may be mentioned as a remarkable and significant fact, that the great mass of opposition has come from the unprofessional and uninformed, whilst physicians and those charged with the execution of the acts have been their steadfast advocates. The medical press in Europe has contended nobly in their defence, and against reasoning of the weakest and most prejudiced character. They have enlisted in their support such a number of distinguished names on the continent as probably no other important measure of reform has ever won in so short a time. Among them Strohl, Behrend, Jaennel, Mayer, Ryan, Acton, and Lagneau have come to the front in demonstrating the practicability of the contagious diseases act and the good results already

attained. The scope of the present paper will not allow anything like a review of the results of the police regulation of prostitution in Europe. The statistics, carefully prepared, abundantly show that great good has been achieved, and they have not been invalidated. After all that has been said about the inefficiency of the French system, the unyielding fact remains that the proportion of venereal diseases in the army and navy of that nation is much smaller than in countries where nothing has been done to supervise the social evil. Legislation in France extends to the civil as well as military population, and embraces in its provisions the sailor, soldier, citizen, and prostitute. It has been affirmed that the annual expense thus incurred was no less than £156,000, and a well-known English surgeon declared in 1870, "we must admit that venereal diseases are nearly four times more common among our troops than they are among the French." The Belgian and Prussian regulations, when their statistics are properly interpreted, have likewise presented the most gratifying results. As a consequence of regulation by the State, among others established, these propositions may be safely asserted: 1. Clandestine prostitution has diminished. 2. The diseases have assumed a milder character, and the average period of stay in hospital has been correspondingly reduced. 3. Unregistered or clandestine prostitutes are affected most frequently and with the severer forms of syphilis. It has been shown that at Bordeaux the proportion of registered women found diseased has never exceeded 18 per 1,000 during the last eight years, while of the clandestine prostitutes a third or even half were found diseased, both at Bordeaux and Rotterdam. 4. It is demonstrated that the average number of men in military service diseased has become much less than formerly—that the women themselves exhibit a better sanitary condition, greater cleanliness and self-respect than ever before, and that many of them are annually reclaimed. 5. The forms of disease most diminished and modified are those in which society in general is most concerned, namely, the syphilitic. In this way we reach the conclusion that toleration, repugnant as it appears, is the less of the two inevitable evils. In contradistinction to these statements no contrast can be more

striking than the social condition of those capitals that have refused recognition and supervision. In the renowned capital of sunny, classical Italy, the land of story and of song, of heroes, poets, and beautiful women, prostitution has never been tolerated in any sense by either Church or State, and here, as elsewhere, the disastrous rule of suppression has worked untold mischief, and rendered prostitution and the worst forms of disease all-pervading. Dr. Jocquet, who, with large opportunities, has studied the subject well, classifies five shapes of clandestinity, and the details of crime and disease are too revolting to be dwelt upon by even the mind accustomed to contemplate the worst forms of depravity. "It has been called the most licentious city in Europe," writes Bayard Taylor of Stockholm, "and I have no doubt with the most perfect justice. Very nearly half the registered births are illegitimate, to say nothing of the illegitimate children born *in* wedlock. I have never seen any place where licentiousness was so open and avowed, and yet where the slang of a sham morality was so prevalent. There are no houses of prostitution in Stockholm; the city would be scandalized at the idea of allowing such a thing. A few years ago two were established, and the fact was no sooner known than a virtuous mob arose and violently pulled them down."* Such facts as these speak for themselves. They are so voluminous and decisive that no comment could enhance their value.

The operation of the contagious diseases act of the British Government, passed in 1866, has been the subject of protracted discussion; much of it conducted in a spirit of fairness, but much of it, unfortunately, characterized by that other disposition so deplorable, of misconception and crimination. A ladies' association has been formed, and issued an appeal against the measure, singular only for its entire want of logic and utter ignorance of the subject. An Anti-contagious Diseases Act Society has been for some time in existence, which, in the plenitude of its sympathy for our benighted condition, has sent over missionary lecturers to harangue the public of our large cities in warning from the errors of their own misguided government.

*Northern Travels. London. 1873.

Now, these indiscreet exhibitions of feeling have really nothing to do with the merits of the question, and ought to be harmless; but the fact is, they do great injury in creating a vicious public opinion, and to this tribunal, whether or not enlightened, the issue must ultimately be referred. It is by facts and statistics that we are to be governed in educating public sentiment, and not by men's antipathies or preconceived notions; and when subjected to the most rigid investigation by this standard, the act has again and again come off triumphant.

Very recently, Surgeon-General Balfour, who was for many years at the head of the Statistical Branch of the Medical Department of the Army, defended the returns issued by the Department, forcibly observing that "the figures, whilst he had the management of the Branch, were certainly not manufactured to suit his convictions, but that his convictions had been coërced by the figures."

"The opponents of the acts," says the "Medical Times and Gazette," "are evidently at their wit's end for means wherewith to keep the opposition alive. The latest manœuvre has been to engage the services of a French lecturer."

As early as 1870 the Committee of Investigation appointed by the House of Commons reported thus favorably: "Although the act has only been in operation a year and a half, and at some stations only seven months, strong testimony is borne to the benefits both in a moral and sanitary view which have resulted from it. Prostitution appears to have diminished; its worst features to have softened, and its physical evils to have been abated." In *the letter of the Devonport surgeons to the Lords of the Admiralty*, a conclusion is asserted which has been before stated as demonstrable of venereal diseases acts in other countries. "The real fact is that it is *precisely those forms of disease in which society is most interested*—namely, syphilis—which have been most beneficially influenced by the system of inspection now in practice, and that it is on the slighter and less important forms that the least impression has been made. The percentage of syphilis has steadily diminished."

Some of the most satisfactory proofs of the benefits secured in the protected stations are to be found enumerated in Dr.

Park's well-known work on Hygiene, where the whole subject is handled in a most careful and admirable manner.

A strong contrast has been presented by Mr. Lane, Assistant Surgeon Grenadier Guards, of the cases of venereal diseases occurring in the same battalion in the same period of time, when stationed at Windsor, a protected, and at London, an unprotected barracks.*

Admissions for Venereal Diseases.

WINDSOR.		LONDON.	
March	11	September	17
April	6	October	29
May	6	November	23
June	7	December	39
Total	30	Total	108

"I may add," says Mr. Lane, "that formerly, before the contagious diseases act was put in force at Windsor, the number of cases admitted and the severity of the disease were greater at that station than at any other."

Any one may be satisfied of the benefits derived by the English troops from these acts through the very simple process of examining the statistics of enthetic diseases among them, and comparing the tables presented since the passage of the act with those for previous years.

When Sir J. Trelawny asserted that these acts were the most benevolent passed this century, he stated what he had ample opportunities of knowing, and when Dr. Brewer declared that more good had been done by them in three years than had been accomplished by the united efforts of the religious world in this direction, he stated a demonstrable fact.

The movement in America has been at the mercy of many temporary agencies, and its extent and design the subjects of continued misrepresentation. Unorganized itself, it has encountered persistent and systematic opposition, the latest feature of which, born of the Anti-contagious Diseases Act Society of England, has culminated in the "Moral Education Society of Philadelphia." The garbled pleas of this organization are such as characterize the manifestoes and philippics of

* London Lancet, January 8, 1870.

the parent body, and contribute absolutely nothing to the discussion of the issue on the ground of either expediency or right. There is no disposition to deal harshly with these good-natured people. It is enough to say that their reasoning (if their homilies may be called so) is obnoxious to the faults of being one-sided, of assuming that the acts are impracticable and offensive, and avoiding *experimentum crucis* of a reference to the results of their operation wherever enforced. Amid such undeserved opposition, it is pleasant to know that many of our leading professional minds have urged a full and fair investigation, and that medical periodicals, like that great journal, the "Philadelphia Reporter," have manfully and steadfastly advocated sanitary control of contagious venereal diseases.

In 1875 a select committee was appointed by the Legislature of that State to investigate the causes of the increase of crime in the city of New York. These gentlemen did their work well. Their report was a voluminous and exceedingly valuable one. Among other important suggestions, they used this advanced and emphatic language in relation to the subject we have been considering: "Whatever may be the odium incurred by the suggestion among honest people who have not mingled with the world, who are ignorant of its passions and their fatal effects, the committee are willing to take it upon themselves in earnestly recommending to the Legislature the regulating or permitting, or if the word be not deemed offensive, the licensing of prostitution. In the interests of the well-being, the decorum, the decency of society; in the interest of peace and happiness of by far the greatest number of people; in the interest of the preservation of the purity of the guardians of the public peace; in the interest of the public health, and for the sake of thousands yet unborn, the committee earnestly urge upon the Legislature as the only means of grappling with the social evil, the granting to the police the power of regulation, of localization, and medical visitation."

It is right to say that these are not the words of men biased by prejudice or self-interest, but they are the utterances of a clear head and cool judgment, predicated on a most elaborate and painstaking investigation.

But little has been said of the extent of the evil we propose to mitigate. We assume that all informed on the subject will admit the universal distribution of syphilitic diseases and their baneful effect on the health standard of the race. When Mr. Simon, a few years ago, ventured to say that "very exaggerated opinions are current as to the diffusion and malignity of contagious diseases," such an array of statistics were at once produced by eminent syphilographers as soon convinced us that the half had not been told.

In response to an application at the Surgeon-General's Office, the following letter and tables were received, and it affords me pleasure to acknowledge my gratitude for the kind and prompt manner in which they were furnished:

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C., August 4, 1876.

Dr. E. T. Easley:

Dear Sir,—The Surgeon-General has handed me your letter of July 24th for reply. Accordingly, I send you a table which gives the mean strength represented in the reports, the number of cases of syphilis, and the number of cases of gonorrhœa, for white and colored troops separately, for five years, from July 1, 1868, to June 30, 1873, inclusive. To obtain similar information from the Navy, you should apply to the Surgeon-General of the Navy.

Very respectfully your obedient servant,
J. J. WOODWARD, Surgeon U. S. Army.

Number of Cases of Syphilis and Gonorrhœa among the White Troops in the U. S. Army from July 1, 1868, *to June* 30, 1873.

	Mean Strength.	Syphilis Cases.	Gonorrhœa Cases.
Year ending June 30, 1869	37,197	3,929	1,999
Year ending June 30, 1870	28,660	2,235	1,390
Year ending June 30, 1871	29,373	2,047	1,255
Year ending June 30, 1872	24,116	1,575	970
Year ending June 30, 1873	24,897	1,544	849

Number of Cases of Syphilis and Gonorrhœa among the Colored Troops in the U. S. Army from July 1, 1868, *to June* 30, 1873.

	Mean Strength.	Syphilis Cases.	Gonorrhœa Cases.
Year ending June 30, 1869.....	4,060	489	109
Year ending June 30, 1870.....	3,200	200	82
Year ending June 30, 1871.....	2,622	134	77
Year ending June 30, 1872	2,506	100	50
Year ending June 30, 1873.....	2,523	172	156

Doubtless these figures do not present all the truth; yet, as far as they go, they represent an extent of disease much to be deplored. The large and uniform preponderance of the ratio of cases of syphilis is a noticeable feature. Thus, in the first of the five years, 1869, we find the aggregate number of men so affected to be 4,418, more by nearly 400 than the entire number of colored troops in service. Now the concern which the law-maker, the statesman, and citizen have in all this is, that whereas the garrison prostitute and camp-follower contaminate the soldier, the latter, in his turn, retorts by infecting the civil population, and so the chain of contagion may be indefinitely protracted, the army being both its scape-goat and its focus of propagation. No part of the social fabric, no condition in life can claim exemption from its ravages. It reäcts on all, and the contagion of to-day will descend to many generations. It was shown, thirty-five years ago, by a comparison of the Carlisle tables, and the ratio of mortality in the English armies, that the profession of arms during peace involved no greater risk of life than that which attends civil pursuits. It is doubtful if the facts would at present justify such a statement. That enthetic venereal diseases have been largely on the increase in the United States Army, may be seen at a glance from the following table, which I have condensed from the statistical reports of Surgeon-General Thomas Lawson, published in 1840:

Number of Cases of Syphilis occurring in the U. S. Army for the Ten Years, 1829 *to* 1838, *inclusive.*

	Mean Strength for 10 Years.	Syphilis Cases.	Gonorrhœa Cases.
Northern Division	22,240	462	971
Southern Division	24,979	584	929
Total	47,219	1,046	1,900

According to this view we have, in an aggregate strength for the ten years of 47,219, only 2,946 cases of venereal diseases. The grand total of all diseases treated during this period, I have ascertained, was 86,565. Only one of the cases tabulated above is recorded as fatal, and that a case of syphilis complicated with chronic diarrhœa. But the most obvious deduction, and the one with which we are now chiefly concerned, is that venereal diseases are not only enormously on the increase in the service, but that it is their worst forms which have increased most; in fact, that the proportions have been reversed. The ratio of syphilis to gonorrhœa for the five years, 1869 to 1873, was as 2 to 1; whereas, in the ten years, 1829 to 1838, in a total of 2,946 cases of all venereal diseases, the cases of gonorrhœa were nearly 900 in excess.

It would be very easy to show that any considerable reduction of the number of venereal cases in the military forces would be a large economy to the nation. If there were no higher incentive, the cupidity of the Government (reform and retrenchment are so much talked of and so little practiced) ought to be a prevailing motive. Indubitably, it is a very expensive thing to sustain and treat thousands of syphilitics annually. It is undeniable too that the disease (not prostitution) can in a great degree be suppressed. Is it not marvellous that the Government continues the outlay and virtually asserts that it can do no more? Let us turn again to the facts, these at least are inexorable, inflexible, and it will not be disputed that regulation laws have always presented among their earliest benefits a striking modification of the severity of the disease, and a cor-

responding reduction of the period spent in hospital. A comparison of the condition and treatment of ordinary and government patients has shown results decidedly in favor of the latter in these particulars, to say nothing of the fact equally manifest, that the actual number of cases constantly diminishes.

There can be no just complaint against the periodical examination of the civil prostitute on the ground as speciously alleged in a late popular journal* of class legislation, of discriminating in favor of the male. Men do not make a business of and live by illicit intercourse, they do not offer and advertise their bodies for purposes of prostitution; women do, they provide apartments and facilities, resort to insinuation, allurement, and open solicitation to entrap the unwary or vicious of the opposite sex; in a word, to augment the earnings of their unhappy vocation. Men were never known to be deterred from unlawful commerce by the fear of contagion, their inclinations and their ability to gratify them have fixed the limit of indulgence; it has always been so, and it will be so (unless the leopard suddenly changes his spots) to the end of the chapter. It is a very superficial misconception of what has been done, and what we propose to do, to believe that such enactments will work any hardship on the women; on the contrary, their whole intention is eminently benevolent and merciful. We do not wish to undertake anything impracticable, but we desire to benefit the women in the most obvious way; to take hold of the mischief where it presents itself most tangibly. I am enabled, through the courtesy of the principal medical officer of that department, to present the letter below relating *to the distribution of venereal diseases* in the United States Navy.

NAVY DEP'T, BUREAU OF MEDICINE AND SURGERY,
August 14th, 1876.

Sir,—In reply to your communication of the 10th instant, you are informed that the mean strength of the navy for the year ending December, 31, 1873 and 1874, was 12,723 and 13,870 respectively. The total number of syphilitic cases treated in 1873 was 595, and of gonorrhœa 225; in 1874, of syphilis, 561 cases, and of gonorrhœa 156 cases. The Bureau regrets its inability to furnish you the same information for the years 1869, '70, '71, and '72, as it is so scattered through its records that it would require much time and labor to make the compilation. Very respectfully,

J. BEALE, Surgeon General.

Dr. E. T. EASLEY, Little Rock, Ark.

Scribner's for August, 1876. Art. The Social Evil.

In conclusion, I may be allowed to say that if I have expressed myself decidedly, it is because I have felt so; if plainly, because the subject has appeared to demand it. In the language of Dr. Gross, in an effort worthy of him in this same direction, "my sole aim has been to be truthful, and to interpret the facts as I comprehend them, and as I discern their importance. The path is not a new one. Other men have walked upon its slippery surface, and have shown the world that they were not afraid to encounter its perils."

The appeal is not to the passions of men or to any transitory interests, but to the intelligence of the age, its advancing knowledge, its enlightened benevolence, and if it fails, we who have been heard, and have dissented from a needless waste of life and health, will, at any rate, have left us the consolation of knowing that we have placed upon record our protest.

ART. II.—*Hypodermic Medication, with Cases.* By JULIAN S. WOODRUFF, M. D., Gaffney City, S. C.

The astonishing and charming effect produced by the subcutaneous injection of medicamenta, and the success I have met with for five years in using the hypodermic syringe, induces me to give to the Profession some few cases from several hundred that have occurred in my practice. A wide-extended and inviting field to usefulness is open to experiment and research, and it is surprising that so little is published in the medical journals of the day on this delightful and all-interesting subject. No treatment is so prompt, rapid, efficient and permanent, or so wonderful and gratifying in its results.

CASE I.—Mrs. D. W. Tate, July 21, 1876. Called at 8 P. M.; found a case of melæna; patient said she had up to this time six stools, all of pure blood; showed me the last one, which I judged to be from the large intestines, as it was free from any admixture of fæcal matter, intestinal secretions, or bile, but as pure as if drawn from an artery; in quantity about eight ounces. The other five stools, she said, had each a greater

quantity of blood than this one. Pulse 120, small and compressible. I immediately injected in one arm one grain of ergotine suspended in glycerine, and in the other one-fourth of a grain of morphine and the one-seventy-second of a grain of the sulphate of atropia.

21*st* 7 *A. M.*—Found the patient greatly improved; one stool during the night containing a little blood; hæmorrhage entirely stopped. Dismissed the case as cured after two more injections of ergotine. No other treatment.

Remarks.—Could anything have acted more charmingly than the one injection of ergotine? The bleeding was immediately arrested, except what was in the bowel. When I was called in that was discharged, and then there was no more.

Case II.—Duffy Paris, farmer, twenty years old; "sun pain" in head for over a week; right eye inflamed and brow swollen; knocked off from work and came to me for relief; injected subcutaneously three-eighths of a grain of sulph. morphia and one-thirty-sixth of a grain of sulph. atropia; in twenty minutes perfect freedom from pain. No other treatment.

Case III.—Mrs. Peggy Hall, fifteen years old, had a male child; born dead, at full term, under the care of "a country midwife," ten miles distant from Gaffney City. Arrived at 10 P. M.; found she had puerperal eclampsia (twelve convulsions) at 10:10 P. M.; had the 13th spasm; very violent and continuous. (She was a powerful young woman of magnificent physique).

July 19*th.*—10:10 P. M., three drops of Norwood's tincture of veratrum viride in arm, and one-fourth of a grain of morphine and one-eightieth of a grain of sulph. atropia. Pulse 140; respiration 24. 10:25 P. M., injected four drops of veratrum viride. Pulse 132. 10:45 P. M., injected five drops of veratrum viride. 11:05 P. M., had fourteenth convulsion; not so strong as the last and about half as long. 11:30 P. M., pulse 110; injected five drops of veratrum viride and one-eighth grain sulph. morphia and one one-hundred and forty-fourth grain of S. atropia. 11:45 P. M., pulse 105. 11:58 P. M., pulse 100. 12:04 P. M., pulse 88. 12:25 P. M., pulse 80; respiration 18. 12:50 P. M., pulse 80; injected five drops of veratrum viride,

one-eighth grain of morphia and 1-144th grain of sulph. atropia. 1:30 A. M., pulse 80; injected five drops of veratrum viride, one-eighth grain of morphia and 1-144th grain of sulph. atropia. 2:30 A. M., pulse 80. 3 A. M., pulse 75; respiration 18. 3:30 A. M., pulse 70; respiration 16. 4:40 A. M., pulse 75; respiration 18; injected 5 drops veratrum viride. 4:55 A. M., pulse 70; respiration 16. 5:45 A. M., pulse 70; respiration 16. 6 A. M., pulse 70; respiration 16; left her quiet and sleeping, with directions to give her four drops of veratrum viride every three hours for four or five doses. No other treatment. This patient got well without a bad symptom.

CASE IV.—O. E. Tate, farmer, presented himself at my office on July 25, 1876, complaining of "a hurting in the left side of chest"; could not hold up any longer; had it for a week past; had given up work and come to me for relief. I diagnosed it rheumatism of the intercostal muscles; injected in arm one-eighth grain sulph. morphia and the 1-144th grain of sulph. atropia. In four minutes all pain had entirely vanished.

August 10*th.*—Pain has not returned up to this time. Patient permanently cured.

CASE V—*July* 25.—Mrs. James Gaffney, a small delicate woman, twenty years old; "cramp colic"; found her suffering intensely, extreme restlessness, skin cold and clammy; had taken a variety of domestic remedies for the past forty-eight hours without any benefit; injected three-eighths of a grain of sulph. morphia and one-seventy-second of a grain of sulph. atropia in arm. Perfect relief in a few moments. No other treatment.

CASE VI.—D. S. Huffstickler, thirty years old, in robust health. Was called to him August 6, 1876, at midnight; cholera morbus; constant vomiting and purging; patient said he had had some forty dejections; great pain; skin cold; much anxiety and jactitation. Injected in arm one grain of sulph. morphia and one-eighth of a grain of sulph. atropia (in three injections at intervals of twenty minutes); in half an hour he was warm and comfortable, where before he had been cold and miserable; all pain entirely gone; vomiting and purging instantly and permanently arrested.

August 7th.—Saw the patient sixteen hours after I had first visited him; he had had two natural stools and was perfectly well.

August 8th.—Patient entirely restored to health. No other treatment.

Remarks.—I could go on multiplying such cases ad infinitum, but will only mention one more case.

CASE VII.—Capt. B. F. Scott; steatomatous tumor on right parietal bone the size of a hickory-nut, caused by being struck by a spent ball during "the late unpleasantness." It gave him no pain, but was very unsightly, and was steadily, though slowly, increasing in size. On July 15, 1876, injected forty drops of alcohol into the tumor from three different points. He immediately complained of intense pain over the right side of the head and face. I at once injected into the arm one-eighth grain of sulphate of morphia and one one-hundred and forty-fourth part of a grain of sulph. of atropia, which extinguished all pain in three minutes.

July 16th.—Tumor inflamed, hot, and slightly painful. Injected again forty drops of alcohol, puncturing the tumor at four different points. This injection gave no after pain, as the first one had done. I particularly requested Captain Scott to return to my office in four or five days to have the abscess (tumor) lanced.

July 23d.—On this day, one week after the second injection, the patient presented himself, saying that he was extremely gratified to inform me that he had got rid of his unsightly tumor; that a few hours before it had burst; the tumor discharged as pus, and upon pressing it the entire sac came away. I at once, in the presence of Dr. James G. Gaffney, made a free incision, and both of us, after a thorough examination, were satisfied that the tumor and sac had disappeared.

August 1st.—Patient presented himself completely cured.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—*Address in Surgery.* Delivered before the British Medical Association, 1876. By W. F. FAVELL, M. R. C. S., Surgeon to the Infirmary, Sheffield, England.

Mr. President and Gentlemen,—In the first place allow me to thank the members of the British Medical Association, and particularly those members who are my fellow-townsmen, for the high honor they have conferred upon me in putting this address into my hands; at the same time, when I consider how many amongst the wisest and most eminent of British surgeons have delivered this address in Surgery before me, I feel how little anything I can say can rival the memorable utterances of bygone years, and how much I need (what I know I shall have) the indulgent hearing of the distinguished company here to-day.

If I can tell you nothing new to attract your attention or excite your admiration, I hope I may be able to say something useful, and at all events to draw attention to facts which will bear investigation again and again. Bearing in mind the rapid advances made in surgery within the last few years, and bearing in mind also the constant changes in surgical practice, it has appeared to me that it is well sometimes, on an occasion like the present, to pass in review some few of the most important changes in practice, comparing them, as far as we can, with recorded results of past experience.

Alterations are by no means necessarily improvements; and in this age of rapid progress are we not sometimes in danger of setting too light a value on the things of the past, and of too utterly discarding some remedial measure to which our predecessors attached immense importance. Permit me, in illustration, to quote the words of one of the wisest and most eloquent of surgeons, Sir James Paget. In a very charming and graceful paper, read at the opening of the Section of Surgery at Norwich two years ago, Sir James, referring to his note-book of cases recorded forty years previously, says: "I found there some things which make me still fear, lest in our progress we should have let fall some things which we had better have held,

and are now regarding some things too lightly that then seemed very grave, and perhaps are so still. For among the records which I found were records of methods of practice almost completely disused, and yet in which I feel confident there was much right. I find, for example, a large and almost uniform practice of bleeding for all acute diseases, for many chronic, for most of those which were unknown and uncertain, and for a large proportion of those in which there seemed to be nothing the matter. Trying to learn something from these things, I come to one or two conclusions, which I am sure the younger members of the profession need to have much impressed upon them. One of them is that at the present day we undoubtedly overvalue the blood, and estimate too cautiously the loss of it."

Gentlemen, these suggestive words from so profound a thinker and a man of such matured experience are worth pondering over; and may we not meet with many parallel cases in surgery? I know of no class of cases more important, more interesting, and in which a more marked change of treatment has taken place within a number of years than cases of fracture of the skull; and I think no records can offer a more marked illustration of this latter fact than the records of some of the master minds in surgery who have been connected with the hospital I specially venerate, St. Bartholomew's. Permit me briefly to quote the opinion of three men following each other in rapid succession, Pott, Abernethy, and Lawrence.

In Pott's "Surgery," published in 1808 by Sir James Earle, we find the use of the trephine in almost all fractures of the skull, whether simple or compound, is strongly insisted upon. He says, speaking generally of these fractures: "The number of cases of this kind which are necessarily brought into a large hospital, so situated as St. Bartholomew's, in the midst of a populous city, where all kinds of hazardous labor is carried on, has enabled me to make many observations upon them; and although I have now and then seen some of them do well without the use of the trephine, yet the much greater number whom I have seen perish with collections of matter within the cranium, who have not been perforated, and for whom there is no other relief in art or nature, has, I must acknowledge, rendered

me so very cautious and diffident that, although I will not say that I would always and invariably perform the operation in every case of simple fracture, yet the case must be peculiarly circumstanced, the prospect much fairer than it most frequently is, and my prognosis delivered in the most guarded, apprehensive manner when I omit it."

And again, he expresses his strong opinion, "that enlarging the opening of a fracture by means of a trephine will not produce or occasion much risk or hazard additional to what must be occasioned by the fracture itself that has already let in air upon the membrane; and therefore, that *that* consideration is, at all events, in some degree at an end"; and so he goes on to argue that, as a matter of *prevention*, operation ought to be had recourse to in nearly all simple or compound fractures of the skull. Moreover, he did not confine his operation to one perforation of the skull, but occasionally trephined in two or three places, so as to embrace the whole of a fracture in the parts so removed; and yet I find, in spite of treatment so heroic, not a few successful cases recorded in his work on surgery.

Abernethy differed in his practice from the course insisted on by Pott. He observed that a slight pressure from depressed bone did not interfere with the proper discharge of brain-function; and, whilst admitting that the pressure so exercised might in some cases set up irritation at a future time, he thought that generally the parts beneath became accustomed to it, and no evil results followed, and he thus cautiously expresses his view of the treatment to be pursued: "From all I have learned from books, as well as from the observations I have made in practice and from reasoning upon the subject, I am disposed to join in opinion with those surgeons who are against trephining in *slight* depressions of the skull, or small extravasations on the dura mater."

Lawrence held, perhaps, a more decided opinion than Abernethy, he being certainly opposed to interference in cases of fractured skull, except where symptoms or other conditions clearly indicated it. In an able article on "Cases of Injury to the Head," by Mr. Evans, of the Hull Infirmary, published in the third volume of St. Bartholomew's Hospital Reports, Mr.

Evans says, "I well remember some years ago the late Sir William Lawrence saying, in the wards of St. Bartholomew's Hospital, where a case had been recently trephined by one of his colleagues, that his experience of forty years in the wards of that hospital was that such injuries did as well without operation as with it."

Here, then, I have briefly epitomized the opinions of three representative men of one of our great surgical schools—men whose opportunities for observation were immense, and who brought giant minds to bear upon the question; and I could considerably multiply opinions both in favor of and against interference in cases of depressed fracture of the skull, expressed by the leading surgeons of their time; and, though I think I may assert that the balance of opinion is now in favor of interfering extremely rarely in such cases, except where marked symptoms develop themselves, and that certainly a great change in practice has taken place since the teachings of Pott, still, with all the light of past experience to guide us, and with all the recorded results of the practice of the great men of former years for our instruction, the propriety of immediate operation in cases of depressed compound fracture of the skull is still an undecided point in surgery. All authorities agree that when symptoms of brain-pressure arise as a consequence of such injury, or where inflammatory symptoms develop themselves, not speedily yielding to antiphlogistic treatment, our duty is then to operate by trephining, or using Hey's saw or bone-forceps where practicable, so as to give exit to pus, or remove a source of otherwise fatal irritation; but it seems to me that the important and yet undecided question is, are we to use the means *at first*, without waiting for the development of symptoms, in order to prevent their occurrence? Does the subject of a compound depressed or comminuted fracture of the skull run a greater risk by being trephined at once, though no symptoms exist, or by being left alone?

Two of the most eminent of living authorities strongly advocate immediate interference; you will almost anticipate me when I mention Mr. Prescott Hewett and Mr. Erichsen.

Mr. Hewett distinctly says that, "in cases of compound de-

pressed fracture of the skull, the rule is to operate, and at once"; and Mr. Erichsen speaks even more emphatically. In his very admirable book on Surgery, he makes the following remarks on the subject: "So far as my own experience is concerned, which is necessarily drawn purely from civil practice, I can say that, with the exception above referred to, I do not recollect ever having seen a case recover in which a compound depressed fracture of the skull occurring in an adult had been left without operation; but I have, on the other hand, seen several instances of recovery, in which the bone had been elevated and fragments removed. The sooner this is done, the better; danger does not arise from early operation, but from delay; the presence of depressed and spiculated fragments pressing into the dura mater must infallibly and speedily induce encephalitis. I have several times trephined under such circumstances as these with success, and have never had occasion to regret doing so. Indeed, there is no class of cases in which the operation of trephining is attended by such successful results as in those of depressed and comminuted fracture." To what circumstances, then, are we to attribute this diversity of practice among men so thoughtful and so well able to form opinions? Possibly the excessive use—I suppose I may say the abuse—of the trephine in former times has been one cause of its almost absolute disuse by British surgeons within late years. I think that in the case of many powerful and active remedial measures, once highly esteemed and strenuously enforced, as extended observations and scientific research prove to us that their employment is frequently unnecessary and often harmful, we are too apt to rush into the other extreme and altogether discard them, overlooking the value of their cautious and carefully-considered employment. Another reason, I think, may be the unfortunate results which statistics give in cases where the trephine has been employed; but here again, if we carefully investigate the existing conditions in many such cases, we must conclude that the same results would have followed, in spite of any treatment. The rule of practice with many eminent surgeons is to have recourse to the trephine *at once* in the treatment of compound depressed fracture, only in such cases

as are accompanied by symptoms of brain-compression, and rarely, I fear, with a fortunate result; and, although in loose statistics such cases go to swell the number of deaths recorded after trephining, has the operation itself anything to do with the fatal result?

I think, if we come to examine such cases after death, we should almost invariably find some serious brain-lesion which could hardly have terminated otherwise than fatally, whatever treatment we had adopted. Permit me on this point to again quote Mr. Prescott Hewett: "It has never fallen to my lot," says he, "to meet with a single case of cerebral disturbances of a formidable or urgent character in which such symptoms were dependent upon depressed bone. In every case which I have seen with these symptoms strongly marked, there was also some extensive extravasation of blood, or some serious lesion of the brain-substance itself."

Again, perhaps the most obvious cause of these diverse opinions lies in the fact that, in cases of depressed fracture, we can hardly lay down a hard and fast line of treatment—much must be left to the careful and anxious consideration of the surgeon unhappily meeting with such cases. I think recent experience has abundantly proved that compound depressed fractures of the skull in adults *do* get well without operative interference; and in illustration of this fact, I beg for a moment to refer you to three cases published in the "British Medical Journal" of July 8, by Mr. Gamgee, of Birmingham. Here we find rapid and uninterrupted recovery from compound depressed fracture of the skull in adults, one man being fifty-five years of age, and the other two twenty-five years old.

They were all treated by perfect rest, cold to the head, and aperients. I could adduce other instances, but I refer to these as cases recently published, and probably familiar to many of my hearers. On the other hand, it is a well-known fact that such happy terminations are by no means constant, and that the trephine or some similar instrument has sometimes to be used to relieve inflammatory symptoms, or to give exit to pus, which occur as the results of irritation set up by the fractured bone; even then recovery is by no means to be despaired of, though,

of course, operative interference under such circumstances is far less promising than when undertaken without the inflammatory complication. Referring to my notes of cases in hospital, I find that only once in the last five years have I had recourse to the trephine, and I did so in what I almost think is a typical case for operation.

H. D., a woman aged thirty-nine, was brought into the infirmary with a history that she was engaged in some street row, and was knocked down by a stone thrown into the crowd. I found a large wound leading down to a comminuted punctured fracture, the portions of bone being driven deeply down. There were no head symptoms. Finding it impossible to pick out the depressed portions with forceps, I removed a semi-circular piece of the sound bone with a trephine, and was able then easily to remove six comminuted portions of bone, some of them driven under the uninjured bone, and amounting in the aggregate to a piece as large as a half-crown. The dura mater was scratched, but not punctured. The woman was kept quiet, with cold to her head, and made a rapid recovery without any untoward symptoms. I think I may instance this as a case in which it is extremely doubtful whether so fortunate a result would have been obtained had I refrained from operation. I think, perhaps, there is a tendency in these days to overrate the danger of operative interference in such cases; for, where grave bone injury already exists, and where air has already had access to the dura mater, and probably also foreign bodies, such as grit and dirt, it is open to question whether an operation, such as I have just described, performed with all possible care and delicacy of manipulation, adds very materially to the existing danger.

Certainly, I should be little disposed to lay down a defined line of treatment in cases such as I have been describing. Much must be left to the discretion and anxious thought of the surgeon, and whilst bearing in mind on the one hand that depressed compound fractures of the skull, even in adults, do get well without operation, one ought not to hesitate to interfere where the existing conditions of the fracture are such as to make one feel that there is probably less risk in interference than in simply waiting for results.

But time warns me to leave this most interesting and important surgical question, and to pass on to the consideration of one or two others, with a few brief remarks; and whilst on the subject of bone injuries, I should like to say a few words upon, and illustrate by an instructive case, and an equally instructive preparation, cases of fractures of bone in the immediate vicinity of important joints. I think there are few cases in surgery in which the accurate diagnosis is often more difficult, the anxiety involved greater, and the results less satisfactory, than in cases of this nature. Every practical surgeon is familiar with the impaired utility of wrist and hand which we occasionally see, particularly in old people, as a consequence of the fracture of the carpal end of the radius; and, again, impaired mobility of the elbow-joint is not unfrequently seen as a result of fracture through some portion of that complicated and important articulation; and I venture to say that such consequences are sometimes unavoidable, in spite of the most carefully conducted treatment; nay, I think I may go even further, and assert that cases do occur in which the surgeon, by skillful and carefully conducted treatment, has obtained the best results he could hope for, and which still are failures in the eye of the patient, ignorant as he is of existing conditions and almost inevitable consequences.

Surely, gentlemen, these considerations should teach us a lesson; they should teach us to look very charitably upon alleged failures in treatment, or upon so-called cases of malpractice. It is one thing to criticise the treatment of a deformed or distorted joint, weeks, or perhaps months, after the receipt of injury, when all *immediate* effects of such injury have disappeared; but it is a very different thing, when contusion, inflammation, swelling, and pain obscure the injury and interfere with manipulation, so to direct our treatment as always to insure a satisfactory result.

The case to which I wish to direct your attention for a few minutes, and which, through the kindness of my friend, Mr. Wheelhouse, I am enabled to illustrate by a very instructive preparation, is one of dislocation of the hip, complicated, as I believe, by fracture of the acetabulum—that is, of the rim of the acetabulum.

A. B., a young man, a commercial traveller, was standing on the platform at a railway station, when he saw the train by which he wanted to travel passing rapidly through the station. He ran up to it, sprang upon the foot-board, and attempted to grasp the door of a carriage, but, being swung round by the momentum of the train, he was unable to keep his hold, and was thrown violently upon the rails, rolling over and over when he came to the ground. He lay stunned for a few minutes, and, when he attempted to get up, found his right leg so injured that he could not rise. He was carried into the waiting-room, and was seen very shortly afterwards by Dr. M., the railway company's local medical officer. This gentleman made a very careful and deliberate examination of the injured limb, and, as manipulation gave great pain, he put the sufferer under the influence of chloroform, so as to give himself every opportunity of arriving at a correct estimate of the nature of the injury. After nearly an hour's examination, he came to the conclusion that there was no dislocation, no fracture; but that the man was suffering from severe contusion. Afterwards, the sufferer was carefully laid in a railway carriage, and conveyed to his home in Manchester. Here he sent for his own surgeon. The same examination again was gone through, and the same result arrived at. As soon as the subsidence of the swelling allowed it, a long splint was applied to keep the part perfectly at rest; and subsequently, as much pain about the hip was still complained of, his medical man, for his own satisfaction and that of his patient, called in a third surgeon, a man whose extended experience in cases of accident was undeniable. He found the limb lying flatly on the bed beside its fellow; careful measurements, conducted in the orthodox manner, proved that the injured limb was as long as, and at one time rather longer than, its fellow, and he coïncided in the conclusions already formed, and in the propriety of the treatment adopted. And so the limb was kept at rest for some time longer. Here, then, we have three surgeons, separately and carefully examining this hip, and arriving at the same conclusions. But mark what followed in this singularly interesting case. When lapse of time and subsidence of pain warranted it, the splint was removed, and

the patient was allowed to get up and try to move about. He did so, and attempted to bear some slight weight upon the injured leg, and *after* that he noticed, *for the first time*, that the injured leg was rather shorter than the sound one. This amount of shortening speedily increased to the extent of a couple of inches, with inversion of the foot; and, to cut a long story short, he consulted a fourth surgeon, who told him that his hip was dislocated; and eventually an action for damages ensued. In consequence of this, Mr. Wheelhouse, of Leeds, and I were asked to examine the case, and give evidence upon it. When we saw it, several months after the accident, the evidences of dislocation were clear enough; there was the characteristic shortening, the inverted foot, and the round head of the bone clearly resting upon the dorsum of the ilium. One of *two* things, then, must have happened in this case. Either (as was alleged) dislocation of the hip had occurred at the time of the accident, and had been overlooked, or else dislocation had taken place subsequently, as a result of some obscure injury to the joint. Against the first hypothesis was the testimony of three surgeons, who had all examined the hip carefully for dislocation or fracture, to the fact of the absence of deformity and the absence of shortening of the limb; whilst in favor of the latter hypothesis, in addition to what I have just stated, was the fact that no shortening took place till the man put weight upon the leg, and then it was immediately noticed. The only way in which one could reconcile the fact of undoubted *present* dislocation, with a history so opposed to its existence for some time after the accident, was on the hypothesis that, at the time of the accident, which was a very violent one, there was fracture of the rim of the acetabulum; that so long as no weight was put upon the leg, the head of the femur remained *in situ;* but that as soon as weight was borne upon the leg, the head of the bone escaped from the damaged acetabulum, and was soon drawn up upon the dorsum of the ilium. This theory was very ably argued by Mr. Wheelhouse, and surely it was a reasonable one—more reasonable than that a dislocation presenting such marked features as dislocation of the femur or the dorsum ilii should have been overlooked, though carefully searched for, by

so many surgeons of ability and experience; and, though the probability of such an occurrence was denied, I am in a position, through the kindness of Mr. Wheelhouse, to show you a preparation taken from a case of accident admitted into the Leeds Infirmary, since the occurrence I have just related, which admirably illustrates the argument then urged. The case was admitted into the infirmary for injury to the hip and severe internal injuries. Dislocation was diagnosed, and reduction readily effected. The patient lay in bed some days, and then died from internal injuries. During the removal of the patient from the bed, the hip, which had been in perfectly good position so long as the man was at rest, again became dislocated, and a post-mortem examination revealed the condition I now show you—viz., "fracture of the rim of the acetabulum."

Erichsen, speaking of the treatment of such cases, says: "But with every care a return of displacement will readily take place, and an unsatisfactory result can scarcely be avoided—shortening of the limb, and consequent lameness, being almost inevitable." Cases such as this one I have just related are of immense practical interest both to the surgeon and his patient. Certainly the patient has a right to expect that everything shall be done for him that careful judgment and judicious management can effect; but how often does the surgeon get undeserved blame when he has the misfortune to treat an injury so complicated that, in spite of all care and skill, he can not avert an unsatisfactory result. I can imagine and excuse a man being angry when he finds himself permanently crippled by an accident, which at first, to all appearance, may not have seemed of a very formidable nature; but surely we, fellow-workers, *all* so fallible, ought to criticise the work of our brothers in the spirit of the widest charity.

The mention of Mr. Wheelhouse's name in connection with this case, in which I was associated with him, reminds me how this Address was originally placed in his hands, and how generously and gracefully he relinquished it when the place of meeting was changed, and gives me the opportunity of paying a passing tribute to his surgical enterprise by a few remarks on what, so far as I know, is an important and an ingenious novelty

in surgery. Some months ago I had an opportunity of examining in the Leeds Infirmary a case then under treatment, in which Mr. Wheelhouse had cut down upon, resected, and united by suture, the divided ends of a sciatic nerve which had been accidentally cut across some months previously. The history of the case was briefly as follows:

The patient, a man aged twenty-two, nine months before admission was climbing over a fence, when the railings gave way, and he fell backwards upon a scythe which he was carrying. The wound, which must have been an extensive one, as the cicatrix measured nine inches, was situated just below the left buttock. At the time of admission he was able to walk with difficulty, there being considerable dragging of the left leg, and, as he lifted it, the toes fell to the ground. He was unable to use the muscles of the back of the leg, and there was loss of sensation on the outer side of the leg and foot, the inner side retaining sensation. These conditions, taken in connection with the situation of the cicatrix, led to the inference that the great sciatic nerve had deen divided, resulting in paralysis of parts supplied by that nerve below the seat of division. The operation consisted in making an incision six inches in length in the course of the sciatic nerve, when the divided extremities were found an inch and a half apart, the upper segment being bulbous, the lower one flattened, and somewhat incorporated with cicatrix. The two extremities were then cut off, the divided ends brought together, and retained by sutures of carbolized catgut. This was facilitated by flexing the leg upon the thigh, in which position it was retained for some time. The man made a rapid recovery. When I saw him, some two or three weeks after operation, cicatrization was almost complete, though the leg was still retained in its flexed position; but there was ample evidence afforded of returning sensation on the outer side of the leg and foot. In this case the restoration of sensation and motion appears to have been very gradual; but Mr. Wheelhouse informs me that since his discharge from the hospital the patient has gone on steadily improving, and gaining power in his formerly paralyzed limb.

I have also the notes of a case of division of the median

nerve by a wound from glass. It was treated in the same way, ten weeks after the accident happened; but the result does not appear to have been so satisfactory, as, though some amount of return of sensation and motion followed the operation as the wound healed and cicatrization progressed, the sensation gradually diminished and numbness increased.

Two other cases I have records of, in which the divided ends of the nerves were brought together by suture immediately after the accident. In one case the median nerve, and in the other the ulnar nerve, were entirely divided. Both cases were boys of fourteen years of age. In one month from the occurrence of the accident both boys were discharged with their wounds healed, and sensation was perfect in each instance.

Now, I think I may instance these as four very suggestive cases. Perhaps they teach us no new facts in pathology; but, practically speaking, I think they are of importance. It will be observed that in the two cases in which some weeks elapsed between the receipt of injury and operation, the results were in one case very gradual and slow in their development, and in the other case satisfactory; but in the two cases in which operation immediately followed accident, sensation, at all events, was rapidly reëstablished. Now, experience has amply proved that regeneration of nerve tissue after nerve division readily takes place more or less perfectly under favorable conditions.

Dr. Hassall says: "The regeneration of the primitive nerve tube admits of proof, both by experiment and direct observation. The experimental proof consists in the simple division of nerves, or even in the removal of portions of them. The parts to which the nerve is distributed of course at first lose their sensory and motor endowments; these, however, after a variable time, are more or less perfectly recovered, thus completing the experimental proof. The recovery of the power of a nerve after the excision of a portion of it argues strongly the fact of the regeneration of the nerve tubes, and this result, by a careful microscopical examination, can be positively demonstrated. The number of tubes in the renewed part of the nerve is stated, however, to be less than in the original portions; and this, in part, explains the reason of the restoration of the functions of a divided nerve being usually but imperfect."

Every surgeon, too, is familiar with the fact that parts which have been completely severed, such as tips of fingers, will, if reünited, regain sensation, though the nerves have been completely divided. Thus, under favorable conditions of position, we may look for such an amount of return of sensation and power of motion, in parts supplied by divided nerves, as shall not materially interfere with future usefulness; but the practical lesson to be learned from such cases as these is, that we may with safety so manipulate nerves as to insure such conditions of position. Perhaps the very painful, and sometimes even disastrous result which has followed the ligature of an important nerve has deterred surgeons from interfering with them when divided. Sir A. Cooper records two cases of death from this cause—one from the ligature of the sciatic nerve to arrest hæmorrhage from an artery in its substance, and another in which the popliteal nerve was accidentally included in a ligature put around the artery. In both cases violent pains and death resulted.

In the cases I have recorded, I find complaint of much pain after operation in only one case—the first one operated on, in which the sciatic nerve was the one implicated. In this case there seems to have been great pain on the day of operation and the day following, but in the other three no mention is made of any disturbance caused by the operation. Probably the use of catgut suture, which we know soon dissolves, and the fact that the sheath of the nerves was carefully selected as the portion to be principally included in the sutures, may have had much to do with such fortunate results.

As a beginning, then, I think these four cases are both interesting and encouraging. If in the case of a limb left paralyzed by the division of an important nerve, we can afterwards cut down upon, resect, and reünite such nerve, so as to restore power and sensibility to the parts supplied by it, at no great risk, much has been gained; and in cases of extensive wound or laceration, involving important nerve trunks, these records raise the question whether it is not better not to be simply content with ligaturing bleeding vessels, and leave the nerve trunk to the chance of assuming its original position, by carefully and accurately

closing the wound, but to insure the coäptation of its divided ends by the careful introduction of catgut sutures.

I wish to say a few words upon Esmarch's elastic bandage and constricting band, for the case of cure of aneurism in the popliteal span, recently published by Dr. Reid, of the Naval Hospital, at Plymouth, as effected by the application of Esmarch's method for restraining hæmorrhage, is well deserving of consideration.

Operating surgeons constantly come in contact with cases in which, either to themselves or their patients, the application of Esmarch's apparatus is a great advantage. In a town like Sheffield, where very heavy manufacture is going on, and where much machinery and steam power are employed, severe accidents, entailing great hæmorrhage, are very common; and repeatedly have we found the advantage of Esmarch's method in the amputation of mutilated limbs, where every drop of blood is of consequence. And, again, how much the work of the surgeon is facilitated in such operations as the removal of sequestra surrounded by new bone, and in the midst of soft structures, often unusually vascular from long-continued local activity. Here his view of facts is not obscured by the constant welling up of blood, and he is able to remove dead bone with the least possible damage to the new formation surrounding it, and acting as a substitute for it. In such operations, too, as those upon the foot, necessitating the disarticulation of small bones, with anatomical relations often obscured by disease and swelling, its advantages are obvious.

Esmarch's method thus secures a twofold desideratum in cases where its application is practicable, for it procures for the surgeon as clear a view of the parts he is operating upon as if he were operating on a dead body, and it secures for the patient the great boon of undergoing operation with the least possible loss of blood. I know it has been urged, in objection to its employment, that there is the risk of squeezing up into parts above inflammatory products, blood clots, or partially disorganized blood; but I think, with care in the application, such accidents can rarely happen. Often as I have applied it, I never remember to have come across such results. The only unfortu-

nate effects I have seen, I think, have been minor ones, such as some bruising and subsequent swelling of stump, when probably the elastic ligature had been applied more energetically than was necessary. The method can hardly be called a new one, though I think to the ingenuity of Esmarch we are indebted for devising the means of making it so widely and generally practicable. But over and above these well-known and generally acknowledged advantages, I must for a few minutes draw your attention to its employment for another purpose—the cure of aneurism. The subject of aneurism was so fully and exhaustively treated by Mr. Pemberton, of Birmingham, before this Association, four years ago, that little can be added to what he then advanced; but in the case recorded by Dr. Reid, when ordinary appliances failed, a rapid cure was effected by the application of Esmarch's bandage and ligature. The subject was a sailor, aged thirty-seven, with popliteal aneurism. Compression was first tried by genuflexion, which caused so much pain and œdema of the leg that it had soon to be discontinued. Afterwards, Carte's compressor was applied at the brim of the pelvis, and again in Scarpa's space; but after four hours' continuous compression, severe pain again put a stop to treatment; and though pulsation in the tumor had ceased, it shortly returned, the opinion being that, although circulation through the femoral was controlled, a free supply of blood got into the sac through the collateral branches. It was then determined to try the effect of Esmarch's apparatus, not so as to empty the sac of blood, but keeping it filled, so to cut off all circulation through the limb as to allow of the coägulation of the contents of the sac. The limb was enveloped in the bandage from the toes upwards, but the bandage was passed very lightly over the knee, so as to exercise little pressure on the sac, and the thigh then enveloped to the middle third. The elastic ligature was passed around the thigh, and kept on for fifty minutes, when pain above the seat of the constriction necessitated its removal. It was then found that all pulsation had ceased; the aneurismal tumor was hard; and, as a means of precaution, a tourniquet was applied, at intervals, over the femoral for a few hours longer, to moderate the current of blood

through the artery. Pulsation never returned, however, and the case when seen some months afterwards was perfectly well.

The striking feature in this case is the rapid cure. One can readily understand stagnant blood, in a vessel in a limb almost deprived temporarily of vitality, speedily coägulating; but it will be observed that this is not precisely the method of cure which we have been in the habit of considering the most desirable in aneurism. The efforts of surgeons, from John Hunter's time, has been so to retard the flow of blood as to encourage the deposition of laminæ of fibrine till the sac becomes filled. In his Address in Surgery at Birmingham, Mr. Pemberton says: "What we want is a stream of blood flowing into the aneurism, that it should be more or less retarded there, and that there should be present something of the nature of a foreign body—for example, the fibrous laminæ—on which blood would coägulate and deposit its fibrine, for I strongly hold that what we want in these cases is a deposition of fibrine rather than a coägulation of blood. Surely the slow deposition, layer after layer, of solid fibrine in the sac until filling in is complete, is a surer guarantee against future mishaps than if it were closed by a mass of suddenly coägulated blood." Now, whilst fully admitting the soundness of the views here expressed, I still consider this case well worthy of the attentive consideration of the surgeon. Certainly, I would prefer the gradual consolidation of the aneurismal sac by the deposition of fibrinous laminæ; but I am sure I have seen cases in which, either from the shape of the aneurismal swelling, or from the briskness of the the collateral circulation, attempts to obtain consolidation by retarding the flow of blood have been useless; and, again, the pain induced by long-continued compression, or the nervous irritability of the sufferer causing him to be intensely sensitive to pain, may thwart our efforts to produce this gradual consolidation. Without presuming to draw conclusions from a single case, I still venture to bring this interesting one before the members of our Association, affording, as it does, another and a novel illustration of the benefits conferred upon surgery by Esmarch. And if further experience proves that, in cases where we fail to obtain the gradual consolidation we have hitherto

aimed at, we can obtain rapid and lasting coägulation by actually stopping circulation in a limb, we shall have made another very important addition to the methods already in use for the cure of aneurism.

Gentlemen, I feel I have already trespassed long enough on your patience. I wish my crude and imperfect remarks had been more worthy of your consideration. I have been able to tell you little that is new and nothing that is original. It is given only to the gifted few to originate ideas and introduce innovations. But still I may hope to have completed a far from useless task if I have succeeded in interesting this large representative gathering in even one or two important surgical questions; for it is only by the accumulation of facts, and by the interchange of experiences, that we can hope to throw light upon those delicate and difficult problems in which the Profession we love so well abounds.

Wholly occupied, as many of us are, in the pressing practical work of our profession, too little time can frequently be devoted to the scientific and more attractive side of it; and yet the humblest worker in our great field of labor, diligently and conscientiously doing his daily work, may reap a rich reward; for, even before wealth and honor, welcome as they are, is the gratitude of our fellow-men for benefits conferred upon them, and the peace that comes from a life spent in trying to alleviate the sufferings of our fellow-creatures.—*Med. Times and Gaz.*

ART. II.—*An Address Delivered at the Opening of the Section of Obstetric Medicine.* By LOMBE ATTHILL, M. D., Master of the Rotunda Hospital, Dublin; President of the Section. [Annual Meeting of the British Medical Association, 1876.]

I think, gentlemen, I may safely assert that the proceedings of this section of the British Medical Association, which is devoted to the consideration of the subjects comprised in the term "Obstetric Medicine," attract, on the whole, more general attention from the great body of our profession, than do those of any other section. The reason for this is sufficiently obvious,

for while the busy practitioner may be wholly unable to devote time or attention to the study of the important subjects included under such heads as those of "Physiology" and "State Medicine," or find that in practice cases of operative surgery are comparatively rare, he is certain to discover that the conditions and affections brought under discussion here, are of daily occurrence amongst his patients; hence he seeks to improve his acquaintance with the nature of the conditions, and to learn the best means of successfully treating those affections, which are peculiar to women; the more so, as the study of these diseases has probably been neglected, possibly entirely overlooked by him, during his student's career.

Another reason for the interest evinced in the proceedings of this section is this, that marked and rapid progress has of late years been, and still is being, made in the department of obstetric medicine. The very name of the section proves this. A few years ago the term "obstetric medicine," if used at all, would hardly have been understood. This section of the British Medical Association was until very recently termed that of "midwifery." Consider for a moment what this change of nomenclature implies—it implies this, that the study of the process and phenomena of parturition, important though they be, is by no means all that is now required of the obstetric practitioner; that is, not of those alone who make obstetrics their special study; but of all, and their name is legion, who are called upon to treat the diseases of women.

This section then includes subjects of a most varied and extended nature; it includes midwifery proper, the diseases of the puerperal state, and those incidental to pregnancy, the considerations of disease of the vagina, bladder and uterus, of the breasts, and last and surely not least, of the ovaries. Diseases of these latter organs are doubtless, in one of their aspects, within the domain of surgery proper; but that condition which demands the performance of the capital operation of ovariotomy, is by no means the most common of those requiring treatment, and, moreover, not a few able and successful ovariotomists are to be found amongst the ranks of obstetric surgeons. Some such I have the pleasure of seeing around me here to-day.

Gentlemen, we deem the practice of midwifery to be in no way derogatory. It is our honorable function to succor woman in her hour of trial, to shorten or relieve her sufferings, often to save her life or that of her offspring; to meet with promptness and decision the numerous dangers and difficulties which frequently and unexpectedly occur during labor, and which tax to the utmost our courage and endurance and skill; but these duties, though most important, form but a small portion of those which now devolve on us daily. The affections I have already indicated as coming within the province of obstetric medicine are so numerous and of such constant occurrence, that the right treatment of them is all important, as well for the sake of the sufferer as for the reputation of the practitioner.

The truth of this is now on all sides admitted, and the study of uterine disease, in its protæan forms, is consequently steadily becoming more general; but unfortunately our knowledge of the pathology of these important affections is as yet imperfect, and our treatment consequently in many respects empiric and unsatisfactory. Still great strides in advance are steadily being made, and we look forward hopefully to a time not far distant when phenomena and symptoms at present overlooked or misinterpreted will be explained, and our treatment consequently become more scientific and efficient.

To the late Sir James Simpson, without doubt, is due the credit of inaugurating an era which has been marked by great and rapid progress in the department of obstetric medicine. His master mind perceived how vast an amount of unrecognized disease, and what an extensive field for pathological investigation, existed with reference to the reproductive organs of women; before his day little was known of uterine disease, and as to treatment, it consisted of little more than in exposing the cervix uteri, and applying to its vaginal surface, if it happened to be abraded, a solution of nitrate of silver, or of some other mild caustic. Of disease of the body of the uterus almost nothing, of its interior absolutely nothing was known. A morbid, and as we now know, an unfounded dread existed of attempting to interfere with, or to investigate the condition of the cavity of the uterus. All this is now changed. We know that disease

of the cervix uteri is of less frequent occurrence, and of less serious import than that of the body, and that its cavity may with impunity be trespassed on, and disease occurring within it successfully combated. Without doubt the most important practical result of the teachings of Sir James Simpson is this, that we do not now hesitate to dilate the uterus and investigate the condition of its interior, when symptoms indicative of serious mischief within the organ require us to do so.

I am well aware that by some practitioners the dilatation of the uterus is still looked on with dread, and that the attempt, if made at all, is undertaken with the greatest hesitation. I can only say that I believe these fears to be groundless, and that, if due care be taken to select suitable cases, and proper methods of carrying out the process be adopted, the treatment is a safe as well as a justifiable one. My own experience in the dilatation of the uterus has been great. I have practiced it very frequently indeed during the last ten years, and as yet in no single instance has a bad symptom followed, nor have I even once been compelled to abandon the attempt. But I am far from throwing doubt on the accuracy of the statements made by others, who have recorded the occurrence of alarming symptoms, or even of death, as consequent on the attempt to dilate the cervix uteri; and I am quite prepared for the possible occurrence of such, for all are aware that cases must occur in which the most trifling exciting cause will be followed by serious symptoms, though no grounds existed beforehand for anticipating the occurrence of such. But these are exceptional, and I believe, as a rule, that when serious symptoms arise, either during the process or in consequence of dilatation of the cervix uteri, they do so either because an unsuitable subject has been selected on whom to practice the treatment, or an unwise method adopted for carrying it out. On examining the records of the cases in which serious or unpleasant symptoms followed the attempt to dilate the uterus, I find they have generally occurred when practiced:

1. Either for the relief of dysmenorrhœa depending on the existence of a narrow cervical canal.

2. When the cervical canal is encroached on by a fibroid of large size and unyielding structure.

3. When the process has been attempted to be carried out rapidly by means of metallic dilators, or,

4. When it has been protracted over several days.

I have therefore, in order to guard as far as possible against the serious results recorded by others as following attempts to dilate the uterus, laid down for myself the following rules, which I can recommend with confidence to others.

1. Never to dilate the cervix uteri for the cure of dysmenorrhœa of sterility depending on a narrow cervical canal or conical cervix.

2. Never to dilate in cases in which a large and dense intramural fibroid presses on and partially obliterates the cervical canal.

3. Never to use metallic dilators of any kind, but to choose for the purpose either sponge or sea-tangle tents, which expand slowly and gradually.

4. Never to continue the process of dilatation for more than forty-eight hours. I prefer, in the few cases I have met with in which, after the lapse of that time, the cervix was not sufficiently opened to suit the purposes I had in view, to postpone all operative interference for some weeks, rather than risk the result by prolonging the dilating process.

With respect to the first of these rules, I look upon the treatment of what is termed "mechanical dysmenorrhœa" by dilatation as being altogether a mistake. I doubt if any permanent benefit has ever resulted from it; while in several cases grave symptoms, and in one death, have to my knowledge followed the attempt. Equally, it is of importance not to prolong the dilating process. My own experience in the treatment of uterine disease requiring dilatation leads me to this conclusion, that unpleasant symptoms are likely to occur in a direct ratio to the length of time over which the process of dilatation extends. Again, I have known death to follow the attempt to dilate the uterus in a case where a large fibroid of dense structure, giving rise to menorrhagia and causing intense pain, was developed in the uterus, and encroached on the cervical canal. In such cases, dilatation is doubly objectionable, because the process is useless as well as dangerous; useless, because you will

generally find that any attempt at operative interference from the interior of the uterus will be impossible; and dangerous, because inflammation is liable to follow, and that too in patients in the worst possible condition for resisting the attack.

Hardly second in importance to the knowledge that the uterus may be with safety dilated to an extent sufficient to enable us to remove large tumors, is the fact of which we are now certain, that remedies of even a powerful nature may, not alone with impunity, but with the greatest advantage, be applied to its interior. But at this point our knowledge becomes defective. Some practitioners prefer one, some another agent, for intra-uterine application. It may be carbolic, chromic, or nitric acid, or iodine, or the solid nitrate of silver; but as yet there has not been, it seems to me, sufficient care exercised in watching the action of the various agents, or in recording the effects they severally produce. Hence we are without dicta on which to base our treatment, or to guide us as to the agent to be selected in the treatment of the various forms of disease requiring intra-uterine medication. It is evident that no one of them can be suitable to all cases. For myself, I prefer carbolic acid in mild, and nitric acid in severe cases; but I freely admit I have much to learn on this point, and I look to others to aid me with their experience in deciding this important question. But it seems to me that, as with the dilatation of the uterus, so it is with respect to the application of agents to the interior of the uterus, that a groundless dread prevails as to their use. Here, too, as in the former case, the treatment is safe if carefully conducted, and if only practiced in suitable cases and at the right time. Thus, if a caustic be applied through a narrow cervical canal, trouble is likely to occur. Equally will it probably follow if the fundus be tender to the touch, and chronic inflammation present; but, if the tenderness be first mitigated, and the inflammation lessened or removed, the application will, in all probability, prove beneficial.

In the treatment of uterine fibroids, too, we have made progress, but not as yet to a satisfactory extent. This much we know for certain, that many such cases, if menorrhagia be not excessive or pain intense, are best left alone; and it is aston-

ishing in how many instances, even where menstruation is profuse, this course proves to be a wise one, treatment being restricted to merely what is absolutely necessary to prevent the flow being excessive. But, unfortunately, exceptions are of but too frequent occurrence; and how are we to treat these? The removal of large fibroids by abdominal section has been successfully practiced, but the risk of life involved in the operation is great; and the attempt to remove smaller ones by means of the écraseur, after dilatation of the cervix, is, I can vouch for from personal experience, a difficult and eminently hazardous process. Again, enucleation is tedious, unsatisfactory, and often dangerous.

We have, however, at our command a resource which, if not all that we desire, is still generally efficient in controlling hæmorrhage, often sufficient to arrest the growth of the tumor, and sometimes apparently capable of reducing its size. I allude to the hypodermic injection of ergot, which, if it has failed in this country to produce the almost marvellous results ascribed to it by Hildebrand, is, if properly carried out, a safe as well as an efficient remedy. In my first cases, the results obtained were not only uncertain, but unsatisfactory, for troublesome sores sooner or later formed at the seat of the injection. Of late, however, I have obtained much better results. In not one of ten cases recently under my care, in which I fairly tested this treatment, has the hypodermic injection of ergot been followed by the formation of an abscess or sore; in all it had more or less effect in restraining hæmorrhage; in one, the injection was repeated almost daily for five months, with the effect of absolutely restraining excessive menstruation, but with no other beneficial result, for the bulk of the tumor remained unaltered, and the pain was as intense as ever. Still it was no small matter to have transformed a profuse and exhausting flow, which formerly lasted for twelve or fourteen days, into one of moderate character and of but two or three days' duration. It is evident, then, that in ergot, employed hypodermically, we have a powerful agent, one capable of exerting a marked influence on uterine fibroids, but still uncertain in its action, and not altogether to be relied on.

Again, with reference to displacements and flexions of the uterus, much still remains unknown, and authorities seem to be as far as ever from agreement as to the important question of cause and effect. It is much to be desired, that the pathology of these conditions should be carefully investigated, and the obscurity which surrounds some of them at least, if possible, cleared up. In fact, to whatever subject we turn, we see that, great as are the grounds for satisfaction at the advancement made in the knowledge of uterine disease, much remains to be done, and much careful observation is still needed, if this department is to hold its position as one eminently progressive. The great obstacle which retards the investigation and consequent elucidation of many points of interest and importance connected with the study of obstetric medicine is doubtless this, that comparatively few patients afflicted with chronic uterine disease die actually of these affections. They may be doomed to a life of constant suffering, and existence itself may become an actual burden; but most probably they will be carried off by some intercurrent disease; and, if a post-mortem examination be made at all, the investigation will be directed to other organs than those of the reproductive system. It would be of the greatest advantage to us if those gentlemen who have the good fortune of being attached to large general hospitals in the capacity of obstetric physicians would direct their clinical clerks to attend all post-mortem examinations made in the hospital on the bodies of females, and record the condition of the uterus and its appendages, and especially the ovaries; for though doubtless, in the absence of clinical records of the history of the patient with reference to her uterine functions, much of value will be lost, still from time to time facts of great importance will be ascertained, and valuable information gained.

Information is specially needed with respect to some forms of ovarian disease. Some patients suffer for years from pain and tenderness of the ovary, from mammary pain and nausea of a most distressing character. Such I have seen reduced to a condition of actual despair; for all treatment seems useless, so utterly inefficient does it prove. In these cases the ovaries are in general plainly enlarged, but the exact pathological condition of them is in many cases unknown. Here is an affection

most deserving of an investigation, both as to its causation, pathology, and treatment. I know of no form of disease which produces more real suffering, equally of mind and body. An American surgeon, Dr. Battey, of Georgia, convinced of the inadequate results produced by ordinary treatment, has recommended the extirpation of the ovaries in such cases, arguing that, from the results on animals, the operation would be safe as well as justifiable in the human female. I confess that to my mind his views contain much of truth, and that, were I satisfied that I did not endanger life, I would in some cases sanction the operation; and I think we may possibly yet see it practiced even amongst ourselves, as I believe it has been in America. But such a practice would, after all, be a lamentable confession of the inadequacy of medicine to cope with what should be a curable disease. Let us hope that, as light is let in on these obscure questions, this reproach will be removed.

Gentlemen, I have I fear exceeded the limits of the time allotted to each paper, and it would ill become one who has to enforce a rule, to break it himself; for I can not conclude without some allusion to what has been termed "the burning question" of the day. I have no intention here of discussing the advisability or otherwise of the admission of women into the profession of medicine; but I must refer to the course proposed to be adopted by the College of Surgeons of England, which decided on granting their midwifery diploma to persons but partially and most imperfectly educated; a step than which I can not conceive one more retrograde, or so calculated to lower the Profession in public estimation, or to inflict injury on the poorer classes among whom such persons would necessarily practice. I am happy to say that the example set by the College of Surgeons in England has not been imitated by any other licensing body, though more than one had the power of doing so; and to the credit of the University of Dublin be it said, that it has recently been decided to grant a special degree in midwifery to persons who have previously obtained one in medicine or surgery, being thus the first British University which has recognized the position gained by obstetric medicine, an example which I trust will yet be imitated by the sister universities.—*British Medical Journal.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—*An Interesting Case.* By A. ANSELL, M. D., Corpus Christi, Texas.

A female child, four years of age, from birth more or less ailing, of scrofulous diathesis; mother and father both suffer from rheumatism, living in a damp, unhealthy locality. The vitality of the child markedly lowered; had been ailing several days; was peevish and fretful. I was sent for on the 19th of November last, when I learned the child had had fever several days and nights ("a high fever"), and that she would not permit any one to touch her right hand; this was very much tumefied, and the little finger very red. The temperature of the little patient was 104.5°; her tongue was furred; her bowels confined; urine scanty, high-colored, and exceedingly acid; pulse full and incompressible; no abnormal heart sounds.

Now, I may be permitted to digress and add a train of circumstances, which, although they may not have connection with the case under consideration, are extraordinarily coïncidental. The father had suffered from gonorrhœa for several weeks prior to the child sickening. He had communicated the disease to the mother. The child slept in the same bed and between the parents, and used the same basin and towel as the parents did. Such was the condition of affairs on the 19th of November. I diagnosed the child's disease acute rheumatism.

On the 25th, the child had severe sclerotitis of both eyes; one more affected than the other.

On the 28th, my attention was called to a vaginal discharge. On examination, I found it to be similar in character to gonorrhœa, and very considerable. I was informed that the act of micturition was accompanied with a fit of crying, the child being evidently in pain. Thus did symptom after symptom arise, all pointing to the specific cause under which the parents labored. It will not be necessary to follow the case in its daily changes, but we may summarize it in the few words that the child recovered after a siege of ten weeks.

The course of treatment adopted was first a brisk mercurial purge followed by aperients; hot poppy fomentations to the hand and forearm, dissolved in which was some bicarbonate of soda; the neutral saline mixture with tincture of hyoscyamus and wine of ipecac; and when the rheumatic fever subsided, she was given the tincture chloride of iron with quinine and a few drops of colchicum wine. The eyes were washed with a weak alum wash and atropia. The vagina was injected with alum and tannic acid, and a simple cold-water dressing over the vulva. Her diet was light but nutritious.

I refrain from comment in this case, not having heard of or seen reported one so young, wherein the train of circumstances would lead one to declare it gonorrhœa, gonorrhœal rheumatism, and gonorrhœal ophthalmia.

ART. II.—*A Bad Case of Anteversion of the Fundus-Uteri.* By N. T. CLELLAND, M. D., Kewanna, Fulton County, Ind.

At 3 A. M., on the 12th of July, I was summoned in great haste to visit Mrs. M. L., a married lady, residing in our village, and the mother of two living children. Mrs. L. has been for several years in poor health from a chronic affection of the lungs and liver. Her age is about twenty-eight years. On arriving at her bedside, I found her in an agony of pain, unable to keep in the recumbent position from the severe bearing-down pains, which occurred at intervals of ten minutes, making her intense suffering much worse while sitting or standing. I immediately prescribed chloral hydrate and sulphate of morphia, with the advice to keep quiet in bed. She soon became quiet, and I proceeded to make a digital examination of the vagina, and to my surprise, I found the fundus-uteri filling the entire vaginal cavity, with os tilted backward toward the sacral curve, which, if I mistake not, is a very rare occurrence, especially when the uterus contained a dead fœtus of four months, which was the case in the one under consideration. Finding I could not return the misplaced organ to its proper position, or find

the os, I returned to my office for my case of obstetrical instruments, and by the aid of an adjuster, I raised the uterus upwards and backwards, bringing the os into its proper place as nearly as the nature of the case would allow it, and delivered her of a male fœtus, much decomposed, four or five months of age before its death, which occurred one month previous to my visit, as near as the lady could tell by her symptoms. In the condition of the uterus she never could have been delivered without aid, as the intense labor pains pressing the uterus down and the os up prevented the exit entirely.

I think I never witnessed as severe suffering in any case of labor as in this, or ever saw a patient as thankful as was Mrs. L. when delivered and free from pain. The original cause of this anteversion was debility and doing her own work while in this debilitated condition. One year previous to this occurrence I delivered this lady of a fleshy tumor weighing nearly three pounds, and she thought from her symptoms and the character of the discharge that accompanied both, that the latter was a similar case, and deferred treatment, in anticipation of Nature's assistance and time effecting a cure.

The after-treatment consisted of womb and vaginal injections composed of one part bromo-chloralum to eight of water, to cleanse and stop after-hæmorrhage; tonics of iron and sulph. cinchonidia and the hyposulphites of soda, potassa, and iron syrup for her lung affection. The lady had a good recovery, and is now enjoying usual health.

ART. III.—*Traumatic Tetanus.* By R. R. LYONS, M. D., Plaquemine Brulli, St. Landry Parish, La.

If my memory is correct, it was in the month of April last that a case of traumatic tetanus came under my observation. Harrison Nixon, colored, about thirty-five years of age, laborer upon my plantation, came to my room about midnight, complaining of pain in the upper part of the back, pain in the chest, and stiffness of the jaws. He exhibited a wound in the

sole of his foot, which was caused by a piece of cotton-stalk while plowing three days previous; and which, according to his statement, up to that time had been intensely painful; when suddenly the pain left the foot and made its appearance in the jaws and chest and between the shoulders.

This is the history of almost every case of traumatic tetanus. Why it is so, has never yet been explained, at least I have never seen a satisfactory explanation.

I ordered warm cataplasms and pediluvia alternately, which were continued until, by derivation, the wound became painful and resumed what might be termed secondary inflammation. On the first day I gave 20 grs. hydrate chloral with half drachm tinct. valerian every two hours; second day symptoms were evidently aggravated; pain at the sternum more severe; rigidity of maxillary muscles more marked; deglutition more difficult, and slight opisthotonos. I gave castor oil and croton oil combined, q. s., to act freely upon the bowels; after which the chloral hydrate was increased to 40 grs. every three hours. Third day symptoms about the same as the day previous. He was scarcely able to swallow; chloral increased to 60 grs. every three hours, with tinct. valerian as before. Patient slept but little; still rational during the whole time, and allowed to take nourishment as often and as much as he desired through the teeth by inhalation. Fourth day opisthotonos disappeared; muscles began to relax; pain at sternum about the same. Treatment continued. Fifth day, patient reported himself much better; swallowed with comparative ease; pain at sternum almost entirely relieved; general relaxation.

I then began to diminish the chloral and valerian gradually for three or four days, when the case was discharged perfectly well, except the wounded feet, which had only the nurse's care but a few days.

I report this case not only because you desire contributions, but to prove the vital importance of using heroic remedies in heroic doses to relieve suffering humanity from heroic diseases.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Boyle County (Ky.) Medical Society.

The Society convened on September 5, 1876, at the usual hour, and the regular discussion was introduced by Dr. A. W. Johnstone with a paper on Acute Desquamative Nephritis. After stating that the subject under discussion was one of that series of diseases known as Bright's disease, and that it had of late years received so great an amount of elaboration that the time allotted him would be fully occupied by a brief review of the subject as it now stands, the speaker passed by the history of the disease and took up at once its pathology. After alluding to the importance of a due comprehension of the physiology of the kidneys in the study of the disease under consideration, he reviewed the minute anatomy and physiology of the kidneys with the assistance of five drawings made from the late edition of Flint's Physiology. The first one represented a vertical section through the *pyramidal*, and the second a similar section of the *cortical* portion of the kidney. The third drawing exhibited the distribution of the blood to the different systems after leaving the arterial arcade. He here pointed out the way in which the blood makes its way through the organ when the malpighian corpuscles and the plexus surrounding the convoluted tubes are compressed by inflammatory matter. His next drawing illustrated the course through which the urine flows, beginning with the convoluted tubes, passing through the looped tubes of Henle, reaching the terminal tubes, and being poured through the straight tubes of Bellini to the calices of the organ. In connection with a drawing illustrating a single malpighian body with its convoluted tube, he recited the several theories as to the mode of production of the urine.

Having in this manner reviewed the structural anatomy and physiology of the kidney, he said that if an inflammation, partaking of the nature of both cartarrhal and croupous inflammation, be engrafted upon the mucous surface of the tubes just described, the condition known as acute catarrhal nephritis would

be obtained. He described the changes which take place from the initiatory hyperæmia to the stage in which the tubes are stripped of their epithelium, and the disease has assumed the nature of chronic Bright's disease.

After remarking upon the changes which occur in the epithelial cells, consisting of proliferation, exfoliation, and mechanical obstruction of the tubes, he spoke of the gross appearance of the kidney during this process, and said the inflammation might terminate in either of three ways—viz., resolution before degeneration has taken place in the cells; a slight amount of degeneration with subsequent resolution; and in the chronic form of the disease.

The speaker introduced the symptomatology of the affection under consideration with the examination of the urine. With some allusions to the significance of the various casts, he said the albumen of the blood passed into the tubes by escaping from the blood vessels just as it will escape when exudation occurs upon any other surface of the body after denudation has taken place; as, for example, when the watery elements of the blood exude upon a denuded spot upon the skin. The only difference consists in the more abundant exudation in the condition under consideration than in the example cited, which is accounted for by the more abundant blood supply and the stronger pressure. In this connection, he mentioned the effects of this depuration of the vital fluid upon the circulatory apparatus, producing hypertrophy of the muscular layers and general dropsy.

He next spoke of the accumulation of urea in the blood as a consequence of the crippled condition of the kidney, and read an extract from Neimeyer on the differential diagnosis of uræmia and œdema of the brain. Retinitis and otitis he mentioned as complications sometimes occurring in the course of acute desquamative nephritis.

The prognosis of the disease was pronounced favorable, except when modified by some complication or surroundings preventing observance of sound hygienic measures.

In the treatment of the disease, he insisted that there are two ends to be kept constantly in view: (1) to give the kidney

rest and thus to ameliorate the inflammation as much as possible, and (2) the prompt treatment of complications as they arise. Under the first head he mentioned those hygienic means which favor the welfare of the patient, and furnish him the advantages obtained by recognizing the action of the skin as complementary to that of the kidneys. Under the second, he alluded to the use of drastic purgatives and diuretics, which are useful in relieving uræmia, dropsy, and other complications.

The speaker closed his remarks by saying, that if the disease should unfortunately pursue an unfavorable course, and greater degrees of degenerative change take place in the organs involved, a supporting course of treatment should be adopted, as in the management of the chronic form of the disease; the discussion of which is beyond the bounds of the subject under consideration.

Dr. Erwin said that the thorough treatise of the subject under discussion by the essayist had given him much pleasurable benefit, and that it had been so exhaustive that he would add nothing to what had been said, simply wishing to express his appreciation of the paper just read.

Dr. Harlan, after alluding to the connection between acute catarrhal nephritis and the chronic diseases known as Bright's disease, regretted that the bounds of this discussion did not include certain points connected with the latter, particularly those relating to climatology. He said that this matter had given him much thought, and he took occasion to allude to the frequency and character of inflammations of renal structure as modified by warm and cold climates, the former furnishing fewer instances of the disease and favoring recovery. Dr. McMurtry expressed his appreciation of the introductory paper, and alluded to the very thorough exposition contained therein of the pathology of acute desquamative nephritis. He said that if he should make any criticism upon the paper, it would be that the part devoted to the pathology of the malady was out of proportion to that allotted to the treatment, a division of the subject of paramount if not greater importance. He thought we should constantly keep in mind in considering this

affection, that it is a simple inflammation of a mucous structure, most frequently resulting from cold, and that a similar condition occurs in the lungs, resulting from the same causes and involving the plexus of blood vessels occurring there, just as the minute vessels of the kidney have been shown to be affected. The indications for treatment are of the same character in both instances, functional rest with careful attention to hygiene. In connection with rest, he alluded to the complementary relation between the skin and kidneys; hence the necessity of increased action on the part of the former emunctory. He called attention to the rarity of chronic albuminuria following the acute disease under consideration. Uræmia is a dangerous complication liable to occur, and should always be kept in mind in treating the malady. It is best prevented and relieved by increased function on the part of the bowels.

Dr. Dunlap called the attention of the Society to a type of fever, now prevalent in this region, which may most appropriately be termed typho-malarial fever. The disease is ushered in with a chill, followed by a high range of temperature, which is reduced under the influence of quinine. The temperature then begins to ascend steadily, enteric symptoms supervene, and all the features of typhoid fever are developed. He remarked that quinine is a very essential element in treatment throughout the course of the disease.

Dr. McMurtry exhibited a set of Nélaton's catheters of superior quality, and remarked upon their great utility and value.

Danville, Ky., September, 1876.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

The First Annual Meeting of the American Gynæcological Society.

ESPECIALLY REPORTED FOR THIS JOURNAL BY P. B. PORTER, M. D., NEW YORK.

MORNING SESSION.

September 13.—The Society met at 10 o'clock in the hall of the Academy of Medicine, New York, the President, Dr. Fordyce Barker, in the chair. After the calling of the roll, Dr. T. G. Thomas, of New York, in a short address, congratulated the Society upon the auspicious circumstances under which it started upon its career, and gave a hearty welcome to the Fellows from a distance, who had come up to the christening, as it were, of this infant association. Before taking his seat, he made a motion, which was carried unanimously, that Dr. Robt. Barnes, of London, be requested to occupy a seat on the platform beside the President, and that several other distinguished gentlemen present, who were not Fellows, should be made the guests of the Society, and invited to participate in its discussions.

The first paper read was on "Incision of the Cervix Uteri," by Dr. T. A. Emmet, of New York. The first part of it contained a large amount of valuable statistical information, founded on 345 cases treated in Dr. Emmet's private hospital, and a still larger number at the Woman's Hospital of New York. Flexions of the uterus he considered to be caused, in a large number of instances, by the means used to prevent conception, and by mental disturbance. Anteflexion, though occasionally congenital, occurs, as a rule, after puberty, and is due to obstruction of the circulation. Retroflexion usually results from retroversion, and is due to an inflammatory process, not of the organ itself, but in the pelvis outside, involving the uterine ligaments. Dr. Emmet criticised Dr. Sims' methods freely, and quoted from several former papers of his own to show that

he now resorted to the knife less frequently than he used to do. Surgical means are applicable only when the flexion is in the cervix, and never when it is confined to the body of the uterus. The most careful and persistent local treatment ought always to be given a trial before any operation is resorted to, especially the long-continued use of vaginal injections of hot water. Dr. Emmet never makes lateral incisions of the cervix unless fibroids are present, and regards Simpson's operation as "uncalled for and detrimental."

Dr. E. R. Peaslee, of New York, said that he could endorse every word that Dr. Emmet had said. He alluded to the paper which he had recently read before the Academy of Medicine, and stated, lest he should be misunderstood, that he did distinctly advocate posterior discision of the cervix in some cases of anteflexion, when the dislocation was confined to the cervix alone. He regarded the operation, which seemed to have been abandoned by Dr. Sims and had been taken up by Dr. Emmet, of immense value in properly selected cases. As a general rule, however, he regarded superficial incisions as much better than deep ones, and regretted very much the absence of Dr. Sims, who, he understood, had given out that he was going to annihilate him (Dr. Peaslee) on this occasion.

Dr. Barnes, of London, thought that more attention ought to be paid to stenosis of the os externum as a cause of dysmenorrhœa and sterility. He had never seen a case of stenosis of the os internum. It is true, the os may be closed by a flexion, but incision is not the way to cure it, and besides, it exposes the patient to the danger of fatal hæmorrhage and peritonitis. Dysmenorrhœa and even flexion are often relieved by curing stenosis of the os externum. Dr. Barnes then related two cases of external stenosis with retroflexion, in which he had treated the former by slight incisions with the scissors, and the latter by the use of Hodge's pessary. Both had been cured, and both had borne children afterwards.

Dr. J. P. White, of Buffalo, advocated the bilateral incision for the relief of internal stenosis, which he believed was much more frequent in this country, at all events, than external stenosis. His method was to make the incisions (which were

much deeper than Dr. Peaslee's) with a small knife like a tenotome, and then apply glycerine and cotton; after which he kept the part dilated with a little instrument working on the principle of a glove-stretcher.

Dr. W. T. Howard, of Baltimore, also believed in stenosis of the os internum, and recommended Simpson's operation to overcome it, though taking extraordinary precautions to prevent hæmorrhage. For the past eight months he had been making a trial of Peaslee's method of superficial incisions, but had found that his cures were not permanent. There is always a tendency to contract in these cases, and in these slight incisions no allowance is made for this. Dr. Howard earnestly defended Dr. Sims, and thought it was not fair to criticise him in his absence.

Dr. Isaac E. Taylor, of New York, stated that he had performed amputation of the cervix in many cases of flexion and sterility, and regarded it as preferable to either lateral or posterior incisions. The cervix usually grows out again, and a normal condition of the organ finally results.

Drs. Albert Smith, of Philadelphia, Wilson, of Baltimore, and Chadwick, of Boston, also took part in the discussion, and then Dr. Peaslee replied, in answer to questions put to him, that we are liable to find stenosis at either the os internum or os externum, or at any point between them. The os internum is more frequently affected than the latter, and when it is not one-eighth of an inch in diameter, there is either stenosis or flexion. In regard to contraction, he explained that this did not take place unless the muscular tissue is cut into, and this should be avoided. The rule is to cut just enough to put the canal in a normal condition, allowing always for congestion. Congestion may return after this operation, but not stenosis, unless there is cicatricial tissue present.

AFTERNOON SESSION.

Dr. A. J. C. Skene, of Brooklyn, read a paper on "Cicatrices of the Cervix Uteri and Vagina," in which he recommended the immediate use of sutures in lacerations occurring during labor. Where cicatrices exist, exsection is to be employed where the

scar is movable on the subjacent tissues, but not otherwise. When the vagina is contracted by cicatricial tissue, it is a good plan to make slight incisions and employ gradual dilatation; for which purpose the slippery-elm tampon is of great service.

Dr. Trenholme, of Montreal, thought the Society ought to express its disapprobation of the abuse of caustics, and particularly the nitrate of silver, which so frequently gives rise to cicatrices.

Dr. Emmet spoke of the bad effect which cicatricial tissue has on the nervous system of the patient, and regarded it as the most frequent cause of neuralgia except anæmia. Any man's success in the treatment of uterine affections is to be gauged by the greater or less quantity of cicatricial tissue which he leaves about his patient. Filaments of nerves are often involved in a cicatrix, just as in a stump after amputation, and hence the great suffering to which cicatricial tissue gives rise.

The next paper was on "Viburnum Prunifolium, its uses in the Treatment of the Diseases of Women," by Dr. E. W. Jenks, of Detroit. He spoke of this plant, which is of the same order as the common snow-ball tree, as one of the most efficacious remedies which we possess for preventing abortion, and mentioned that he had used it for several years with admirable results.

Dr. Andrews, of Detroit, also places more reliance on viburnum as a prophylactic against abortion than on any other agent. It is especially useful in those cases in which miscarriage becomes habitual. It is best given in the form of the fluid extract (made from the bark of the root), and should be administered in teaspoonful doses three times a day for two days before the time when the menses would naturally appear, and kept up until two days after they would naturally cease. It may be given every two or three hours when abortion is imminent. Dr. Jenks regards it both as a uterine sedative and a tonic, and thinks it very useful in the sympathetic disorders of pregnancy. It is, however, as valuable a remedy in gynæcology as in obstetrics, and the writer was glad to find a growing tendency to rely more than formerly on therapeutics in gynæcological prac-

tice. The viburnum is of great service in menorrhagia and all uterine disorders caused by loss of blood, and on account of its grateful tonic and stimulant properties is also useful in phthisis, malaria, and at the menopause. It is not equal to ergot where there are any uterine growths, but may be advantageously combined with it. It has no oxytocic effect. In dysmenorrhœa, if the flow is large, it gives great relief; but has no effect if the flow is small. It is a valuable adjuvant to other remedies in the neuralgic form of the disorder.

Dr. Mundé, of New York, asked if he would regard it as a substitute for opium in abortion, and Dr. Jenks replied that he would place greater reliance upon it than he would upon opium.

Dr. Theophilus Parvin, of Indianapolis, now related a "Case of Abnormal Menstruation," in which at the time of the menstrual molimen the lower lip would become black and swollen to twice its ordinary size. When he first saw it he thought it was a case of gangrene of the mouth, but on closer examination found blood oozing from the lip and gum. This condition lasts for five or six days (when the parts resume their natural appearance), and has now returned for six successive months. Dr. Parvin had never met with any satisfactory explanation of the curious phenomena of vicarious menstruation.

The next paper was by Dr. Horatio Storer, of Boston, on "The Importance of the Uterine Ebb in Pelvic Surgery." The writer compared the menstrual cycle in the life of woman to the ebb and flow of the tides; the ebb commencing when the catamenia first made their appearance. Hence it was always best to select the first week after the cessation of the menstrual flow for any operation upon the female.

Dr. H. F. Campbell, of Augusta, Ga., said it had always been his custom to observe this rule; but he was glad to have the subject set forth with such clearness and force.

MORNING SESSION.

September 14*th*.—The first thing in order was the Annual Address of the President, which was of great ability and interest. After offering his congratulations on the successful inau-

guration of the Society, he expressed the hope that it would always maintain a very high standard, and that it would always be regarded as a distinguished honor to become one of its Fellows. He gave some excellent advice in regard to the kind of papers which should be presented, and the spirit which should govern their discussion, and then went on to give a sketch of the progress of gynæcology during the past one hundred years, a progress greater than in the thousand years preceding it. By way of conclusion, Dr. Barker trusted that it would never be said of the members of this Society, in the language of Job: "Ye are all physicians of no value!"

Dr. Barnes then read a paper on "Some of the Relations of Pregnancy to General Pathology," apologizing in an amusing way for its desultoriness, on the score that it was mainly written while he was being pitched and tossed on the heaving bosom of the Atlantic. There was an old proverb, he said, which runs thus: "Any fool can ask questions," and as he had always regarded the Americans as being particularly good at solving difficult problems, he was going to put some conundrums to the Profession in this country which he should hope to have the pleasure of having answered before he returned to England. Then plunging into his subject, he remarked that he thought the phenomena of pregnancy, if thoroughly and correctly studied, ought to throw a great deal of light on both pathology and physiology in general. He alluded first to the condition and changes of the blood in pregnancy, especially the loss of red globules and its increased coägulability, involving the interesting subject of thrombosis. In speaking of the chemical changes, he dwelt for some time on the increased consumption and diminished exhalation of carbonic acid, and then went on to state that an actual hypertrophy of the heart took place during pregnancy. The question consequently arose, which occurs antecedently, the dynamical change in the blood, the chemical change, or the hypertrophy of the heart?

Dr. Barnes next took up the subject of the glandular system, and spoke first of the thyroid, which Meckel has called "the uterus of the neck," and which is increased in size both during menstruation and in pregnancy.

There is a striking parallel in Graves' disease, or exophthalmic goitre, and thus we see that pregnancy simulates pathological processes, though we can not answer why this is so. In speaking of the spleen, he maintained that pregnancy was frequently known to occasion a relapse where the patient had formerly had intermittent fever (without any new exposure to malaria), and that in these cases the ague-cake, which had long since disappeared, would form again. Of this he has seen several instances in his own experience. Here the part played by the spleen is probably secondary. In this connection, he stated also that chorea is apt to manifest itself during pregnancy in those who have been subject to it when children; so that pregnancy may thus be regarded as a test of the ultimate cure of the chorea. Here we see a latent condition which is probably in reality due to a permanent change of nerve structure.

In regard to the mammary and other secretory glands, it is not difficult to see why they are increased—each having a special purpose to fulfill. Thus the glands of the cervix uteri often become so active as to cause hydrorrhœa; but this must be regarded as a natural means of evacuation to relieve the hyperæmia of the organ. So the excessive salivation seen in some instances (due to the increased development of the salivary glands) is probably for the purpose of rapid elimination from the system. The condition seems pathological, but there is not much chance of relieving it, except to a limited extent, by the derivative action of hydragogue cathartics. We find the sebaceous and sudoriparous glands also very largely developed during pregnancy, and even the liver is considerably enlarged, because its functions are greatly increased. Whenever the bile is not properly formed or the excretions are deficient, we find that the liver is "shirking work," and jaundice results, (!!) with the accumulation of excreta in the blood.

The kidneys were also said to be enlarged, but though this had not been positively proved, it was certain that they had increased work to do under the high physiological pressure which pregnancy induces.

Dr. Barnes then took up the subject of albuminuria and eclampsia, and illustrated the subject by the effect of strychnia

on the frog. Here, said he, we notice three elements: (1) The centric spinal tension, sustained by nature; (2) The irritability from the poison in the system; (3) Eccentric irritation. So in puerperal convulsions we have: (1) Exalted nervous tension; (2) Irritability produced by the poison (uræmia); (3) Eccentric irritation (may be any slight external cause). Thrombosis occurring in pregnancy has been known to produce the remarkable affection known as acute atrophy of the liver; and albuminuria is sometimes instantaneously produced by the shock of a convulsion. Sugar occurs occasionally in the urine of pregnant women, and the study of this phenomenon may yet solve the as yet mysterious problem of diabetes.

After alluding to affections of the eye and derangements of the functions of the skin in pregnancy, he went on to speak of the lungs. If the lungs were damaged, carbonic acid would accumulate in the blood, the woman's life would be in danger, and abortion would result. It has been proved that this poison acts as an excitant to unstriped muscular fibre, and hence it affects both the heart and the uterus. In the pregnant, abortion almost universally precedes death by asphyxia.

While speaking of the vomiting of pregnancy, Dr. Barnes stated that when rapid wasting and irritative fever ensue, premature labor ought always to be induced; for, otherwise, the patient will probably die.

The lymphatics have their great work to perform when labor is over. Through them not only is the uterus diminished in size, but the whole body; so that the puerperal woman usually loses about one-fifth her previous weight in the first ten days after confinement. When this process of melting down is interfered with by septic matter in the uterus, we may have phlegmasia dolens as a result. The blood in which there is already an excess of fibrin becomes coägulated in the veins and lymphatics, and the presence of a chemical poison causes deposition of fibrin. Such observations ought to throw some light on the phenomena noticed, also in typhoid fever, cancer, and phthisis.

In scarlatina, the state of arterial tension, as indicated by the sphygmograph, will give warning of the approach of albu-

minuria (which can be warded off by the prompt administration of hydragogue cathartics), and the same is true in pregnancy. Extravasation occurs when the tension becomes too strong, and apoplexies and hæmorrhages are therefore to be regarded as safety-drainages. The hæmorrhage may take place from the lungs, stomach, intestines, bladder, or wherever there is mucous membrane, and is sometimes apt to be excessive, especially when from the uterus. These natural, but irregular, hæmorrhages warn us that the pressure must be relieved, and consequently we must endeavor to promote watery excretions from the skin, kidneys, and, particularly, the bowels. Menstruation is, in reality, a mimic pregnancy.

Dr. Barnes has given a great deal of study to the interesting subject of pigmentation, but beyond arriving at the conclusion that it is probably due to nervous influence, he has not been able to form any definite opinions in regard to it. He thinks that the supra-renal capsules of every woman dying in pregnancy should be carefully examined, and trusts that in this way much of the mystery that now enshrouds the phenomena which we continually meet in this connection may finally be cleared up.

This important paper was discussed at some length by Drs. Peaslee, Lusk, Nœggerath, and Richardson.

AFTERNOON SESSION.

Dr. W. H. Byford, of Chicago, read a paper on "Spontaneous and Artificial Disintegration of Fibrous Tumors of the Uterus." He first narrated a case in which this disintegration took place spontaneously, with pains at times like those of labor, and the discharge of considerable quantities of fibrous matter from the vagina, accompanied by some febrile reäction. The tumor was regarded as of the submucous variety.

Dr. Byford then detailed Dr. H. B. Merriman's case, in which disintegration of a fibroid was effected in a similar manner by the fluid extract of ergot, given in thirty-drop doses three times a day, and intermitted occasionally as circumstances seemed to require; and afterwards reported two cases of his own treated in the same manner and with perfect results. In the second one, he stated that the whole cure was in reality effected by the first three doses of ergot which the patient took.

Dr. Byford then proceeded to speak of the *modus operandi* by which the disintegration takes place. In the spontaneous case which he had described, the vaginal discharge and labor-like pains were preceded by a low type of fever, which he regarded as due to an inflammatory process going on in the tumor. The first discharge consisted of the remains of the broken-down submucous capsule, and after that the mass of the tumor became a foreign body, which the uterus struggled persistently to throw off. In regard to the action of ergot, he thought it as sure as that of rhubarb, when the drug was of good quality. It acts only with efficiency when the fibres of the uterus become hypertrophied, and peritoneal tumors are therefore less amenable to the treatment than the submucous and mural. The conditions necessary for a cure by means of ergot are the following: (1) Smoothness of contour. (In nodulated tumors the fibres are smaller); (2) Hæmorrhage; (3) Lengthened uterine cavity; (4) Elasticity. (Shows that cartilaginous degeneration has not commenced).

There are a few patients who will not tolerate ergot by the mouth, and to them it should be given by the rectum or hypodermically. Different quantities are required in different cases, and of course the time in which the disintegration takes place varies very greatly also in different cases. Sometimes a cure is effected in a few days, and sometimes it takes years; and it is well to know that ergot can be given freely for protracted periods with impunity. The discussion of Dr. Byford's paper was postponed till the following morning, and Dr. Thomas, of New York, read the history of "A Case of Abdominal Pregnancy Treated by Gastrotomy." Many difficulties were presented in making the diagnosis, but after four quarts of fluid had been drawn off from the abdomen, Dr. Thomas felt sufficiently sure of it to operate, notwithstanding the fact that the so-called ovarian corpuscles were reported in abundance in the liquid evacuated. After an incision in the median line, he cut through the peritoneum, and inserting his left hand, felt the breech at the brim of the pelvis, while his right hand outside detected the head near the ensiform cartilage. The funis was found attached to the peritoneum in the iliac region, but no

attempt was made to remove the placenta after the delivery of the child, on account of the certain danger of profuse and probably uncontrollable hæmorrhage. A large glass drainage-tube, through which antiseptic injections could be made, was then inserted into the cavity of the abdomen and the wound left partially closed. The child weighed seven pounds, and was finely developed. The cause of its death had evidently been a hair, which was found wound tightly around the funis several times. In four or five weeks the placenta came away spontaneously (at least to such an extent that it could be easily seized); after which the abdominal wound was finally closed, and the patient made a perfect recovery. The special points to which Dr. Thomas called attention in this case were: (1) If a correct diagnosis had not been made before the operation, the peritoneum would have been pealed off from the abdominal walls (under the supposition that it was the capsule of an ovarian tumor), and fatal peritonitis would no doubt have been set up: (2) If the placenta had been removed at the time of the operation, fatal hæmorrhage would probably have ensued; (3) The wound should be kept open in these cases as long as the placenta remains in the abdomen; (4.) The value of antiseptic injections is also seen. Dr. Thomas has now seen seven cases of extra-uterine fœtation before the rupture of the cyst. In four of them he operated, and in the other three left the case to nature, and the results were four recoveries and three deaths. In each particular case, however, we must be governed by individual circumstances, and no certain rule can be laid down as to what measures should be taken.

Dr. Barnes thought it was perfectly right to leave the placenta *in situ*, but it was open to debate whether the abdomen should be left open. Absorption may take place or the placenta may dry up, being in either case inocuous; but if septicæmia should occur, the wound could then be opened again. He regarded the difficulty of diagnosis as very great in some instances, and said that he had twice mistaken an ovarian tumor for extra-uterine pregnancy. The microscopic test he thought fallacious.

Dr. Engelmann, of St. Louis, and Dr. Chadwick, of Boston,

also thought the microscopic examination of fluid from ovarian cysts uncertain; and were of the opinion that there was no such thing as a distinct ovarian corpuscle.

Dr. Drysdale, of Philadelphia, stated that for twenty-three years he had been engaged in the examination of abdominal fluids, and out of 1,500 specimens had never made a single mistake. He was therefore firmly convinced that there was a distinct ovarian corpuscle, and that if the proper tests were made, there ought not to be any doubt about the matter in any given case. Dr. Byford corroborated Dr. Drysdale. He had examined the fluid from thirty-five abdominal tumors, and in all ovarian cases had invariably found the cell described by Dr. Drysdale, while in all cases not ovarian it was lacking.

Dr. Thomas remarked that the great majority of microscopists were not able to make a correct diagnosis in these cases, but stated that in every instance in which he had consulted Dr. Drysdale, who was so exceptionally skillful in this matter, he had found him entirely correct.

The next paper was by Dr. H. F. Campbell, on "Pneumatic Self-Replacement in Dislocations of the Gravid and Non-Gravid Uterus." In the genu-pectoral or knee-and-breast position, said he, the replacement is assisted by gravity, by the draught of the viscera, and by the pressure of the external air; and in order to facilitate the entrance of air, he was in the habit of employing a little glass tube, inserted in the vagina, and called by him the repositor. One great advantage of the method is, that it can be employed by the patient herself, when necessary, in the absence of the physician; and Dr. Campbell related three cases to show its applicability to various conditions. The paper was discussed by Drs. Emmet, Peaslee, Wilson, Chadwick, Mundé and Albert Smith.

MORNING SESSION.

September 15.—The discussion on Dr. Byford's paper was opened by Dr. Atlee, of Philadelphia, who remarked that natural disintegration was confined to submucous fibroids, whose decay was like that of fruit or the dry rot of wood. When it takes place, the tissue must be removed rapidly, either sponta-

neously or by art, or blood poisoning, which may result fatally, will take place. Antiseptic injections are therefore to be employed, together with a general sustaining treatment. Parturition sometimes breaks down and destroys fibroids, and there is then imminent danger that the woman may fall a victim to septicæmia. When artificial disintegration is resorted to, great care ought to be taken to counteract this tendency to septicæmia by appropriate measures.

Dr. Goodell, of Philadelphia, related two cases of fibroid successfully treated by ergot. In one the disintegration originated during labor, and in the other he made an incision into the capsule, which seemed to facilitate the process.

Dr. Drysdale stated that he was in the habit of giving large doses of ergot in intra-mural and submucous fibroids. He commenced with half a drachm of the fluid extract and gradually ran it up to half an ounce three times a day. He had given it for a year at a time without any bad effect whatever, and one case did not completely recover until the end of the second year.

Dr. Emmet thought failure of ergot to bring about disintegration due more to not studying the character and situation of the fibroid than to the quality of the ergot employed.

Dr. Thomas said that ergot acts in a two-fold manner. First, it causes expulsion, aided by gravity, and, second, in interstitial tumors, as pointed out by Hildebrandt, it causes destruction of tissue by interfering with the circulation. The extraordinary control of ergot over the blood vessels was now universally recognized in general practice.

Dr. Nœggerath, of New York, read a paper on "Latent Gonorrhœa, especially with regard to its Influence on Fertility," in which he stated for a long time both before and after the publication of his monograph on this subject, in 1872, he had been looking for a specific fungus, but had now given this up, believing that none could be found. The general symptoms of latent gonorrhœa in the female were back-ache, general malaise, difficulty of urination, a viscid, greenish discharge, profuse followed by scanty menstruation, perimetritis and sterility. This train of symptoms was never seen in virtuous women,

unless their husbands had at one time or another been infected with venereal disease. The inevitable conclusions were, that the husband, though apparently well, had never been perfectly cured, and that these symptoms were set up by a true gleet, existing in the male, and communicated to the female. Gonorrhœa is a disease that lasts for life in men. It spreads from the external meatus along the whole mucous tract to the testes. The parts washed by the urine (which is loaded with remedial agents) get well, but the others do not. Dr. Nœggerath had frequently found unsuspected strictures, and behind these there was invariably a little gonorrhœal matter (even years after the acute disease had been cured), which, by the straightening of the canal, would be ejected in the sexual orgasm, but which was too small in quantity ever to form a drop at the external meatus between the periods of urination. In women, the poison goes through the vagina, uterus, and Fallopian tubes, and finally reaches the ovaries, where it sets up an inflammatory process. The effects then noticed are as follows: 1. Perimetritis. 2. Recurrent perimetritis. 3. Chronic perimetritis. 4. Ovaritis, accompanied by chronic uterine catarrh. Dislocations of the uterus, due to inflammatory processes in and about the ligaments, are also of frequent occurrence. The diagnosis of latent gonorrhœa from simple leucorrhœa is to be founded on the following points:

1. The discharge is of a glairy character, greenish, yellow and blue in color, adhering to upper part of vagina. 2. A narrow line of erosion about the os uteri. 3. Dislocation of the uterus. 4. Catarrh and erosion of the vulvo-vaginal glands. 5. Erosion or irritation about the meatus urinarius. 6. Condylomata, of the size of a pin-head, about the vulva. 7. The above symptoms occur in a married woman who has been previously well.

In regard to sterility, Dr. N. stated that this existed in fifty out of every one hundred women suffering from latent gonorrhœa, and that out of sixty-six which had come under his notice, fifty-six were either sterile or aborted before full term. One great cause of this was in the husband; for he had invariably found that in these cases the spermatozoa were either dead or of small vitality, or else altogether absent from the seminal

fluid. When consulted, therefore, for sterility by a patient, he always insisted on first making a microscopical examination of her husband's semen.

These startling doctrines were combated with ability and eloquence by Drs. Trenholm, Engelmann, Chadwick, Johnson, of Washington, and Taliaferro, of Georgia; and Dr. Nœggerath confessed that there was *no positive proof* of their correctness. They rested entirely on circumstantial evidence, but he regarded the amount of this so overwhelming that he could not resist the conclusion to which it all pointed.

A paper on "Death from Uræmia in Certain Malignant Diseases of the Uterus," by Dr. Alfred Wiltshire, of London, was then read by the Secretary, in which the author expressed the opinion that the suppression of urine, from which the uræmia results, is due to the occlusion of the ureters—in many instances by the inflammation of surrounding lymphatic glands. The paper was discussed by Drs. Skene, Campbell, Barker and Wilson.

The next paper was by Dr. Engelmann on "A Menstrual Hystero-Neurosis of the Stomach," in which he narrated three cases where the menstrual molimen, when the flow did not come on freely, was accompanied by attacks exactly simulating acute gastritis. The special point which he wished to make was, that the same condition of the nervous system is produced by pregnancy and menstruation, and that the same chemical and anatomical changes and appearances, differing only in degree, are found in both of them. Thus, in both the uterus becomes enlarged and its mucous membrane tumefied, and in both there is shedding of the superficial layers of the latter, with loss of blood. In pregnancy the mucous membrane develops for a number of months, and then, after parturition, the shedding takes place. As one would naturally expect, a much larger portion of the mucous membrane is cast off, and with a much more profuse discharge of blood after pregnancy than during menstruation.

AFTERNOON SESSION.

Dr. Peaslee read the history of a case in which he had performed Battey's operation for extirpation of the ovaries. The

patient was a lady of great refinement and cultivation, and who, although her vagina terminated in a *cul-de-sac*, and there seemed to be an entire absence of a uterus, was otherwise perfectly developed physically. There seemed to be an ovary on the right side, but neither a left ovary nor any fallopian tubes could be detected. For years she had suffered agonizing pain, and the strength of her intellect seemed gradually failing. She had been subject at first to violent hysterical attacks, but at last these changed to true epilepsy of a severe form; and under these circumstances Dr. Peaslee, after consultation with Drs. Thomas and Emmet, decided to undertake the removal of the ovary, or both, if the left should be found. The operation was performed at the Woman's Hospital June 7, 1876; when the right ovary was found to be normal in size, but containing several small cysts. Two matured ovisacs were seen on its surface. The left ovary was also present, and normal in size; but about an inch behind and lower than its usual position. It, too, had an ovisac on its surface, and depending from it there was a polypiform appendix of considerable size. The patient did well for twenty-four hours, when peritonitis set in, and she died at the end of fifty-eight hours. At the autopsy a uterus was found to be present, but it was found to be of a curious character. There was a rudimentary cervix, and then the body was divided into two equal parts, two and a half inches long, and filling up the broad ligament on either side. Neither portion had any orifice nor cavity in it. Dr. Peaslee stated that he was emphatically opposed to Battey's operation, as generally understood, on account of its dangerousness, and that he would never perform it for the sake of relieving physical suffering (which, indeed, it offered but a small chance of doing), but only for the prevention of threatened idiocy or insanity, in those cases where the mind was seriously affected.

Dr. Trenholm related two very interesting cases in which he had removed the ovaries by cutting through the vagina, and stated that he regarded the operation as devoid of all danger if performed in this way. In one of his cases the pulse never rose above 90 nor the temperature above 99°.

Dr. Thomas then gave the history of three cases in which

he had removed the ovaries by abdominal section. The first was one in which an ovarian cyst had already commenced to form, but the other two were cases of Battey's operation proper. In one of them he first made an incision through Douglas' cul-de-sac, but finding that he could not remove the ovaries without involving the rectum, he was obliged finally to perform gastrotomy. This patient died of peritonitis in forty-eight hours. Dr. Emmet stated that he was opposed to Battey's operation under all circumstances, except where it was undertaken for the relief of epilepsy.

Dr. Battey was prevented by illness from being present, and his disputed operation is to be made the special subject of discussion at the next meeting of the Society.

The last paper read at this session was one on the subject of "The Treatment of Acute Lacerations of the Female Perineum, and of Lesions of the Recto-Vaginal Septum," by Dr. Goodell, in which the author took up *seriatim* and answered the objections which have been urged against the immediate operation in the former class of cases, and then showed by a number of instances in his own practice the good effects resulting from this plan of treatment. In lesions of the recto-vaginal septum he would not so persistently recommend an immediate operation.

Dr. Emmet said that in perineal lacerations it was decidedly for the interest of the Profession to delay operating, but for the interest of the patient to operate at once.

Drs. Campbell, Wilson, Skene, Howard, and Jenks all advocated the immedtate operation, as a general rule, though the last gentleman stated that he had found the operation followed by success only after rapid labors; while it failed after long, instrumental labors. Dr. Barker, in closing the discussion, hinted that much might be said on the other side of the question, but time would not permit of his going into the subject.

He then stated that he had received a letter from Dr. Sims, in which he said that he had been unavoidably detained in Europe, and that he considered it the great disappointment of his life not to be able to be present at the meeting of this Society.

After a few congratulatory remarks by the President on the

success of its first meeting, the Society adjourned to meet at Boston in May, 1877. The officers were all reëlected, and are as follows: President, Fordyce Barker, of New York. Vice Presidents, W. L. Atlee, of Philadelphia, W. H. Byford, of Chicago. Council, J. Marion Sims, of New York, W. Goodell, of Philadelphia, T. Parvin, of Indianapolis, G. H. Lyman, of Boston. Secretary, J. R. Chadwick, of Boston. Treasurer, P. F. Mundé, of New York.

A number of papers were presented, which could not be read for lack of time, but which will be published in the Society's Transactions. Their authors were Drs. Battey, of Georgia, Richardson, of Boston, Chadwick, of Boston, Campbell, of Georgia, Bixby, of Boston, J. Matthews Duncan, of Edinburgh, and Mr. Lawson Tait, of Birmingham, England.

CHEMISTRY AND PHARMACY.

"Diruit, ædificat, mutat."—Hor.

Doctor of Pharmacy.—The ways for increasing the revenues of some medical schools seem to have been exhausted within the limits of decency when we read that the Atlanta Medical College has attached a course in pharmacy to its ordinary medical curriculum, and, while lacking, so far as we can learn, even a shadow of the apparatus essential to the proper illustration of a branch which requires in so eminent a degree manipulative skill, it awarded the title of Doctor of Pharmacy to eighteen young men at its last commencement. If its Professor of Materia Medica and Therapeutics is able to teach his students more than a bare outline of the general properties and doses of the principal remedies, he accomplishes more than most of his professional confreres; but for a college to profess to give, in forty evening lectures, sufficient instruction in materia medica, chemistry, and practical pharmacy to warrant the granting of the degree of Doctor of Pharmacy, is to place the school below the level of the "University College of Pharmacy, Penn.,'

which does not attempt the sham of professing to teach, but sells its diplomas outright.

It would be an admirable thing if students in medicine could always have instruction in practical pharmacy as a part of their curriculum, or in the shape of a post-graduate course; but they have already more to do than can be well accomplished by most of them in the time at their disposal, and there are plenty of good pharmaceutical schools to which such as are disposed can resort for the latter. A good general knowledge of pharmacy, such as would be of practical service to most physicians, especially such as dispense their own medicines, is a thing quite different from such a command of the subject as would warrant the title of "Doctor of Pharmacy"; and when any school organized like the Atlanta Medical College claims to impart it, we not only doubt the value of its pharmaceutical degrees, but lose any respect we may have had for its medical faculty also. —*New Remedies.*

NOTE.—Are these charges correct?—E. S. G.

Native Epsom Salts.—A lake which has a deep deposit of sulphate of magnesia in almost a pure state is reported as having been discovered not far from Laramie, W. T.—*Ex.*

Cinchona Trees in India.—There are now nearly 2,700,000 cinchona trees on the Government plantation in the Neilgherry hills, the height of the tallest being 34 feet, and with a girth near the ground of 28½ inches. The number of plants issued to private cultivators is 33,000, and the quantity of seeds 510 ounces. The harvest of Government cinchona bark on these hills for the year 1875 was 65,200 pounds, worth about £6,700. The whole yield of cinchona bark from the Madras Presidency is about double that amount, 130,000 pounds having been brought into the London market between April, 1875, and April, 1876.—*Ex.*

Test for Uric Acid.—M. Didelot gives the following reäction for uric acid, which he asserts to be of an extreme sensibility. Upon a small piece of guano, or of the excrements of birds or

snakes, or of any substance which may contain it, a few drops of nitric acid are dropped, and a small quantity of the mixture is rubbed with a glass rod or with the finger upon a knife-blade, a spatula, or any bright piece of iron, which becomes immediately coated with a layer of Prussian blue.—*Rep. de. Pharm.*

A Secret Remedy for Asthma.—A writer in the "Peninsular Journal of Medicine" says an analysis of "Langeil's Asthma Remedy" shows that it is a mixture of ten or twelve parts of coarsely powdered belladonna leaves with one part of nitrate of potassium dried together. The packages contained about two ounces, and were priced at $1.25 each. On igniting a portion on a plate, combustion takes place slowly and the fumes are inhaled. It is said to give prompt relief, is much asked for, and can be sold in quantities for about half a dollar a pound.

Action of Butylchloral.—Professor Liebreich has made a series of experiments with butylchloral upon rabbits and the human subject, which are reported in the "Centralbl. f. d. Med. Wissensch." In the case of human beings the following facts were noted: To a child aged four and a half years, after trials had been made with smaller doses, 2.5 grm. of butylchloral were given in sweetened water. It soon fell into a sleep, from which it could be aroused by pinching its arm, falling again into slumber as soon as the irritation ceased. Irritation of the cornea, however, had no effect, and it appeared to be entirely without sensation. This want of sensibility was noticed even when the child was roused from its sleep; but the nasal mucous membrane, on the other hand, was sensitive. To lunatics 5 grm. were given, and sleep, with anæsthesia, produced while the patients remained seated upon their chairs, to such an extent were the sensibility and reflex irritability of the body maintained. Contrary to expectation, this remedy has afforded but slight relief in cases of tic douloureux.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

Lectures on Fever. By WILLIAM STOKES, M. D., D. C. L., Oxon, F. R. C. S., etc., London. Philadelphia: H. C. Lea. 1876.

These lectures were delivered in the theatre of the Meath Hospital and County of Dublin Infirmary. As is proper in didactic effort, they are clear, decisive, and to the point. They give the result of Dr. Stokes' own experience for more than forty years. He "speaks as one having authority," and very properly so. He divides his lectures into two parts, first, "Essential Fever and its Secondary Affections," and second, "The Treatment of Fever." In part first he dwells upon fevers, as divided into the "Essential" and "Symptomatic," and devotes four chapters to the condition of the heart in fever. He considers very lightly the element of heat, giving no prominence whatever to it. (!!) Those who would hope to find in part second any specific line of treatment recommended, will be disappointed, for Dr. Stokes is sufficiently scientific to discard specific prescriptions; in all instances treating the cases according to the symptoms peculiar to it.

While he thus takes from the student the support of routineism, he obliges him to observe carefully for himself, and gain strength and experience which would here be lost under a different course.

The work is published in this country under the editorial auspices of Dr. J. W. Moore, of Philadelphia.

Transactions of the Kentucky State Medical Society, 1876.

The present volume presents a very attractive appearance, and is very creditable to the Publishing Committee in charge of it.

In examining its pages, there is evidence of there having been an exceptionally agreeable and improving meeting. The citizens and physicians of Hopkinsville are certainly entitled to the warmest commendation for their successful labors in receiv-

ing and entertaining the Society, and there is no difference of opinion as to the fact that the entertainments, private and public, were, in every respect, liberal, elegant, and reciprocally agreeable. The address of welcome, by Dr. S. B. Hickman, of Hopkinsville, was very chaste and appropriate, and was certainly conceived and delivered, as is generally admitted, in a manner highly creditable to him. The attendance was excellent, and the work performed more than usually good. The resolutions offered in memory of Dr. Lewis Rogers, by Dr. Lunsford P. Yandell, Sr., were most appropriate and unexceptionable. They are excellent specimens of Dr. Yandell's best style, and are creditable alike to himself and the distinguished physician whom they are intended to honor. The same may be said of Dr. L. S. McMurtry's resolutions in memory of Dr. John D. Jackson, of Danville, Ky.

The paper, on Transfusion, by Dr. F. C. Wilson, of Louisville, Ky., is one worthy of unqualified commendation. Such papers must do much good. The lecture of Dr. Speed, at night, and before a mixed audience, is said to have been well written and delivered. It does not appear, however, in the Transactions. The paper on Medical Ethics, by Dr. C. H. Todd, is unusually good. It is an able eulogy and timely defence of a collection of laws which can not be too fully valued and protected.

The volume contains a paper on the Medical Literature of Kentucky, by Dr. L. P. Yandell, Sr. The whole of this contribution is devoted to a review of the writings and life of Dr. Charles Caldwell. It is a very severe and bitter paper. According to its author, Dr. Caldwell's character was far different from the estimate generally formed of it. He was vain, egotistical, overbearing, quarrelsome, bitter, suspicious, without friends, unfair, a poor teacher, visionary, and professionally erratic, without professional practice, experience, or skill, and so devoid of personal pride or self-respect that the Trustees of the University of Louisville could only get rid of him by expelling him. In speaking of Dr. Caldwell's autobiography, he says: "It is defaced by every blemish in an exaggerated form and degree that detracts from the value of his other writings. The

temper displayed all through it, the tone, the style, the taste, its matter and manner, all are bad. It is not only egotistical and vain-glorious beyond everything I believe to be found in the English language, but it is at the same time defamatory. The author holds himself up to admiration on all occasions and everywhere, from boyhood to old age, as a very hero of romance," etc., etc. Indeed, when one reads Dr. Yandell's review of the life, writings, and character of Caldwell, he feels bewildered over the fact that one whom the professional and secular Public called great, should appear so entirely the opposite of all that was ever heard or read in regard to him. It would appear that the world knew nothing of this distinguished physician, for all that his reviewer will admit in regard to him, save his alleged vices of personal and professional character, is that he was six feet two inches high, had a pair of black eyes and a bald head. A small basis, it must be allowed, on which to claim distinction or fame. Dr. Yandell's best friends will admit that this paper is injudicious and unkind; and when it is remembered that this is not the first or the second occasion on which this illustrious physician has been posthumously paraded by his present critic before the world for condemnation and contempt, it will be believed, and indeed felt, by all, that the paper was as unnecessary as it is unfair. It is true that some allowance is to be made for Dr. Yandell; for Dr. Caldwell, in his analysis of Dr. Yandell, was more than severe; he was terrific; for when after bringing Dr. Yandell before the Public, trying him in various positions, making him prominent, etc., he, in this analysis, censures himself for want of a correct estimate of his protegé, and describes him as fit to be only a college trumpeter or "drummer" (the word used), it must be admitted that some allowance is to be made for Dr. Yandell's repeated "biographies"; but when all that is good and noble and great in the grand life of this distinguished physician is omitted, and all that is objectionable is made prominent, the Profession will feel that human nature crops out against honest judgment; and that the biographist of Dr. Caldwell is unjust in it all. Dr. Yandell, as a clergyman and as a pulpit teacher, should remember the noble elements of charity;

he should remember that he preaches of charity, and should practice what he preaches; or a little of it at least. Besides all this, the matter has gone far enough, and it becomes the Press to censure such a spirit as has been manifested in these biographies of Dr. Caldwell, and to protect the memory of the helpless and distinguished dead from ignominy and injustice.

Dr. Larrabee, of Louisville, presents a useful and practical paper on the Treatment of Scarlet Fever, and one on Epidemics.

The paper on Hypodermic Medicine, by Dr. Saunders, of Paducah, is highly creditable and practical. The following extracts will be read with pleasure by all:

"I have formerly called the attention of the Profession to the benefits to be secured by the hypodermic treatment of Asiatic cholera. My experience in its use commenced in an epidemic of this dreadful disease which visited the city of Paducah in 1873, and I am thoroughly satisfied that by the use of *atropia*, hypodermically administered, many of the sufferers from cholera were saved who would, under any other plan of treatment, have died. I feel confident in saying that in the management of cholera and cholera morbus I would rely *more* upon the hypodermic method than on all other means combined; while at the same time I would not omit other remedies which have proved serviceable in these diseases."

"In the cold stage of *intermittent* or *congestive* fevers, atropia injected under the skin will bring about reäction with more certainty than all other means commonly used in such cases. It will *abort* the chill if applied at the onset in most cases. It is, in fact, *the remedy* above any that I have knowledge of in grave attacks of congestion."

"In puerperal convulsions, when the patient is entirely senseless, utterly unconscious, and incapable of swallowing, we may bleed, give chloroform, and administer our remedies by enema with some advantage, but something is needed more *permanent* in its effect than chloroform to quiet the nervous system. Nothing answers so well in such alarming emergencies as morphia and atropia hypodermically."

"I have seen two or three cases of the most distressing asthma

relieved almost instantly by the injection of morphia and atropine hypodermically, after many of the known remedies for that disease had been tried without benefit. And I also report a few cases of soft piles as having been cured by the injection of the fluid extract of ergot into the relaxed tissue of the bowel.

"The preparation which I am in the habit of using, and which I constantly carry about me, is composed as follows:

Sol. Morphiæ Sul. (Magendie's), 1 oz.;

Atropiæ, ½ gr.;

to which a little glycerin and two or three drops of carbolic acid may be added to keep it pure. Dose, from ten to fifteen drops, which is about half the minimum dose by the mouth."

The article on Dermatology, by Dr. L. P. Yandell, Jr., bears evidence of hasty writing, as it is not possible for the author to seriously believe what he is represented as believing. He states that cutaneous maladies "must be treated with reference to their cause"; knowing, of course, that in very many of these maladies variola, scarlatina, rubeola, varicella, erysipelas, rötheln, malignant pustule, elephantiasis, keloid, molluscum, purpura, etc., several of the non-diathetic diseases, and many of the so-called reflex troubles, the cause is not known; and knowing also that in very many diseases where the cause is known, the treatment is empirical and tentative. Again, he states that chronic skin affections "have their origin in the strumous diathesis, while the acute skin affections have their chief source in malaria." Of course Dr. Yandell knows that there are large areas of country in which malarial diseases are never seen; cities in which malaria is unknown, and yet in all of which acute skin diseases are rife, and often malignant. As to chronic skin diseases having their origin chiefly in the strumous diathesis, facts teach exactly opposite. The scrofulides form a very small and decreasing family of skin diseases, and while struma is fast disappearing, chronic skin diseases are constantly increasing. Dr. Hays, the physician of one of the expeditions to the Polar Seas, states that the Esquimaux are remarkable in being entirely free from scrofula; he did not see a single case of it among them, and yet they are the victims of many chronic cutaneous diseases. Old Dr. Chapman and Dr. S. Henry Dickson always taught that scrofula was fast disappearing.

This paper will not be criticised further than to ascribe such unfortunate blunders to hasty and ill-considered writing. That a medical journal reviewing this paper should eulogize it,* only shows that the truth of an old aphorism is often illustrated, "when the blind lead the blind, both fall into the ditch." No one will laugh over this fact, of course, but no one, with ordinary powers, can fail to realize and admit that it is fact.

Dr. M. F. Coomes presents a very practical and excellent paper on Chronic Suppuration of the Middle Ear.

One of the most useful papers in the volume is that on Cinchonidia, a Substitute for Quinine, by Dr. J. W. Compton, of Evansville, Indiana.

Dr. J. A. Octerlony's paper on the Diagnosis of Syphilitic Diseases of the Skin will be read with both interest and profit by all; it is a superior article.

Dr. J. L. Dismukes contributes a very interesting clinical report of a case of cranial injury, in which the skull was trephined in four places. After long, profuse suppuration, the patient made a complete recovery.

The address of Dr. Hodge does him great credit, and shows that he is carefully observant and appreciative of all the advances made in the varied departments of medicine.

The last paper in the volume is on Capillary Bronchitis, by Dr. John L. Cook, of Henderson, Ky. It commences with a statement that he had read Juergensen's article on Catarrhal Pneumonia, as published in Ziemssen's Encyclopædia, and had stated to the Henderson Medical Club that what Juergensen describes as pneumonia, is capillary bronchitis!! This will be a sad blow to the celebrated German clinician.

The Recording Secretary, Dr. J. W. Singleton, deserves great credit for his work.

The Society meets next at Louisville, on the first Tuesday in April, 1877.

The following reprints have been received:

* This Journal is edited by Dr. Yandell's brother, and by an unfortunate coincidence the whole eulogy appeared in the Courier-Journal, a daily newspaper of Louisville.

Urinary Calculus, a synopsis of thirty-seven cases, and "Immobility of the Jaw," with report of cases, by Dr. W. F. Westmoreland, in "Atlanta Medical Journal."

Auscultation of the Œsophagus, by Dr. Louis Elsburg, in Transactions of American Medical Association.

On Stricture as the Initial Cause of Gleet, with remarks on the urethral calibre, by Dr. F. N. Otis, in "N. Y. Medical Journal," April, 1876.

Remarks on Urethral Stricture, before British Medical Association, by Dr. F. N. Otis, in "British Medical Journal," February 26, 1876.

A Report on Dermatology, by Dr. L. P. Yandell, Jr., in the "American Practitioner," May, 1876.

On some of the Disorders of Sleep, by S. Weir Mitchell, in "Virginia Medical Monthly," January, 1876.

New Instrument for the Ready and Effective Use of the Double Current in the Treatment of Suppurating Cavities and Pelvic Drainage, by Dr. George H. Bixby, in "Boston Medical Journal," November 18, 1875.

The Normal Standard of Woman for Propagation, by Dr. Nathan Allen, in "American Journal of Obstetrics," April, 1876.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

The Medical College of Virginia.—The Catalogue of this Institution contains on one of its pages a warm approval of the action of the Convention of medical colleges in regard to beneficiary appointments. On the opposite page this College offers to take all beneficiaries who come at $50 each, provided they pay also, if second-course students, $30 for the diploma fee. The "Louisville Medical News" gave half of this information (the first half), but suppressed the rest. This, it is true, is not falsehood, but it is false dealing with the Public.

The Virginia Medical Monthly.—This Journal, conducted usually with courtesy and fairness, has admitted into its last number a most remarkable article on medical colleges; the paper is signed by Henry T. Bahnsen, Salem, N. C. With a large medical acquaintance in North Carolina, and a familiarity with almost all medical men of prominence there, the name given is really unknown. It is believed, however, that it really represents somebody. The article indicated is so silly, stupid and absurd, and the statements made so absolutely false, that it is wonderful how the Monthly could have admitted such stuff in its pages.

Sewer Ventilation.—By J. Makinson Fox, M. R. C. S. (Cockermouth). The summing up of this paper was as follows: I will only further detain the Section by recapitulating in order the points sought to be enforced in the paper. Sewers and water carriage continue to be the approved method for the removal of excreta, solid and liquid. Defective arrangements of them are to be amended, and not used as arguments against the system. The excremental function may well be supposed to afford a difficulty in regard to its inoffensive performance in a populous town. But the difficulty should rather be diminished by a system involving concentration than by one of diffusion. Ventilation is the keystone to the difficulties most experienced at the present time. The ventilation should be thorough, and independent of atmospheric and other conditions. A severance between the soil pipe and the sewer by means of an open man-hole is objectionable. On the other hand, all other sink, slop, and overflow pipes should be thus severed, alike from sewer and soil pipes, and deliver in the open air. The soil pipe of every water closet inside a house should be extended through or above the roof. This should be enforced at least by the by-laws of every sewered town. The responsibility of individual closet or peripheral sewer ventilation should lie upon owners. The additional sewer ventilation thus secured would be enormous. There is less suction of foul air from the sewer in the closets of the poor, which are outside houses. The charcoal baskets in street sewer ventilators offer much impedi-

ment to the passage of air, are useless, and should be removed. Surface storm water gullies, remote from dwellings, should also be untrapped, and frequently cleared from road detritus. An interchange of the inside and outside air goes on in all modern street sewer openings for ventilation; and currents of air are also casually established between them. But ventilation should surely and systematically secure the ingress of pure air and the liberation of foul. Connection of the sewers with mill chimneys may in some cases secure this end. Connection with house flues is most objectionable, and rain water and down-spouts are not to be depended upon. The banner ventilating cowl is the inexpensive adaptation of the suction principle, by means of which local currents are established in sewers. This apparatus is perfectly efficacious, is capable of universal adaptation, as well to a sewer as a closet, and obviates each peculiar defect attaching to every other known expedient for the same end.

Normal Ovariotomy. *To the Editor of the Richmond and Louisville Medical Journal*—Sir: In the issue of your Journal of September, 1876 (upon page 241), some remarks of mine, made before the Central Kentucky Medical Association, upon the subject of the operation of Normal Ovariotomy, have been reproduced with rather startling emphasis. Justice to the originator of this operation demands that I should publicly modify the expression, "that the others had not been in the the least benefited," as I am informed by Dr. W. T. Leachman, of this city, that two of the cases operated upon, and who are under his professional care, are *perfectly well.* I give his exact words.

This note is intended to remove any sense of injustice which my remarks, made some two months since, might have caused the gentleman who originated the operation. Very respectfully, your obedient servant, ELY MCCLELLAN, M. D.

NOTE.—The above was received too late for insertion in the proper department.—E. S. G.

The Flat Roof as a Recreation Place in British Towns.—By W. Wilberforce Smith, M. D., London. In the East the house-top has been utilized from early times. In the South of

Europe it is commonly made available. In this country it is used very exceptionally. (A photograph was exhibited of the boys' play-ground at Sheffield, nearly level with the lofty roof; also of model dwellings at Notting Hill, with drying ground on the roof.) The author suggested that attention should be directed to the practicability and advantages of constructing houses in crowded towns with the roofs available. Thousands of acres of open spaces could thus, by degrees, be reclaimed from the occupation of the town sparrows. The air circulating freely over house-tops is found by experience to be comparatively fresh and breezy. The cost involved, it is ascertained, would be but small. Inquiry has elicited no important objection. The limits which our climate offers apply, in a nearly equal degree, to the play-ground or the grass below. The idea that smoke would interfere is not sustained by experience; for instance, at the model dwellings at Notting Hill there is seldom any hindrance to drying clean linen. An obstacle, which it is necessary to overcome, is the noise occasioned by children playing overhead. This can be obviated by leaving a slight additional space between the roof and the ceiling, and filling it with such a material as sawdust. The ordinary construction of flat roofs is already familiar to many builders (in London, for instance). The additional requisites are the necessary staircase, and a strong parapet or railings. Blocks of buildings could be arranged with a large common roof. The author contended that the gradual adoption of such a plan would be of incalculable value to the public health.—*Brit. Med. Jour.*

Poisoning from Lead in Vegetables.—Dr. D. De Loos, of Leyden, writes in the "Weekblad van het nederlandsch Tijdschrift voor Geneeskunde," that he was consulted in October last regarding certain symptoms of paralysis and nervous disturbance which suggested the idea of lead poisoning. The symptoms occurred in a family residing in the neighborhood of a place where a manufactory of white lead had stood twelve years previously; they made use of vegetables growing on the spot. In order to make it certain that the poisoning was produced, as he believed it to be, by the vegetables, Dr. De Loos

examined chemically some red beet, endive, and carrots, and ascertained the presence of lead in all. In a beet weighing 650 grammes, he found the equivalent of a centigramme of metallic lead; in another of about the same size $1\frac{1}{3}$ centigrammes; in six carrots, weighing altogether 272 grammes, there were $1\frac{3}{4}$ centigrammes of metallic lead; and the metal was also found in the endive. The ashes of the plants also contained traces of copper, which had probably existed as an impurity of the lead.

Etiology of Puerperal Fever.—Dr. Huntley, of Jarrow-on-Tyne, relates his experience of the communication of puerperal fever by the physician. In his case the outbreak was manifestly associated with himself, as it was exclusively confined to his practice, notwithstanding there were four other practitioners in the town. All precautionary measures were taken to eradicate any contamination, such as baths, changing of clothes, but all to no purpose. He eventually went over to Ireland, and remained there six weeks. Nevertheless, the first two or three cases that he attended showed unmistakable signs of infection, and he was compelled by the serious consequences to cease the practice of this branch of the profession for a further period. He left his practice in charge of a *locum tenens*, and no case of puerperal fever occurred in those he attended. From a careful consideration of all the circumstances, Dr. Huntley thinks that the causes of puerperal fever may be divided into (1) those originating in the patient herself, as general unhealth, giving rise to inflammation of the uterine and peritoneal structures, or such as spring from intra-uterine causes, putrescence of the infant or of the other contents of the uterus; (2) such as spring from atmospheric influences and give rise under ordinary circumstances to fevers, as scarlatina, typhoid, and typhus; and (3) the form which he was himself the unwilling instrument of propagating, in which the contagious influence is somehow intimately associated with the *person* of the obstetrician, and not with his surface or clothing only. It may be, he thinks, that the toxic influence is not generated in the system of the physician *de novo*, but being received from external sources in the first instance, it becomes propagated by some unknown means —*Brit. Med. Jour.*

MEDICAL NEWS.

'Nulla dies sine linea."

The International Medical Congress met at Philadelphia September 4th. There were 71 foreigners present and about 375 American physicians. Among the foreigners may be mentioned the names of Lauder Brunton, William Adams, Robert Barnes, Brudenell Carter, Richard Davy, of London; Lister, Simpson, Robertson, Edinburgh; Debaisieux, Louvain; J. Estlander, Finland; Gori, Amsterdam; Englested and Hansen, Copenhagen; Hjort, Norway; Hudson, Australia; Ishigouro and Muyake, Japan; Melecro, Havana; Rudnew, St. Petersburg; Servais, Antwerp; Tufnell, Ireland; Yasvopolsky, St. Petersburg; Grant, Hingston, Hodder, Rosebrugh, Trenholme, Canada; Hueter, Griefswald; Rawson, Buenos Ayres; and many others from many other countries. France was not represented, strange to record. Dr. Gross delivered an excellent address of welcome. The Congress was then organized. Dr. Gross was elected President. Vice-Presidents, P. F. Eve, Tennessee; Jolliffe Tufnell, Ireland; W. L. Atlee, Philadelphia; C. Lange, Copenhagen; T. G. Richardson, New Orleans; W. H. Kingston, Montreal; J. P. White, Buffalo; H. Muyake, Japan; Hunter McGuire, Virginia; N. R. Smith, Baltimore; Rudnew, St. Petersburg; J. M. Toner, Washington; Heuter, Griefswald; J. B. Johnson, St. Louis; Smeleder, Vienna; J. Hjort, Norway; G. L. Collins, Rhode Island, R. F. Hudson, Australia; H. Gibbons, California; N. S. Davis, Chicago; William Adams, London; Baisieux, Belgium; L. A. Dugas, Georgia; Simpson, Edinburgh; J. K. Bartlett, Wisconsin. The Sections were then formed and officered. In the Congress and Section officers, foreigners were not properly or hospitably considered, and the South and West together received scarcely as many positions as did Philadelphia alone. This may be Centennial courtesy, but it was not Colonial courtesy one hundred years ago. Valuable papers were read by Drs. P. F. Eve, Austin Flint, Sr., J. J. Woodward, John T. Hodgen, Christopher Johnston, James O. White, Robt. Barnes,

Austin Flint, Jr., C. R. Agnew, Lunsford P. Yandell, Sr., Theophilus Parvin, J. M. Toner, Wormley, Bartholow, Rudnew, of St. Petersburg, W. H. Van Buren, F. J. Bumstead, J. M. Woodworth, L. E. Chaillé, Charles Denison, Harrison Allen, L. A. Sayre, C. H. Mastin (by proxy), W. T. Lusk, E. L. Keyes, E. G. Loring, C. J. Blake, E. R. Squibb, H. Hartshorne, William Adams (London), H. Lebert (Zurich), E. Z. Hunt, L. A. Dugas, R. Howard, J. G. Kerr (China), W. H. Byford, and several others whose names have escaped attention. These papers were generally of a high order of merit. As notices, and perhaps abstracts of them, will appear in this Journal, no more will be stated here. The private and public hospitalities tendered were elegant and generous. The Committee of Arrangements deserve much praise for their work. Dr. Gross presided admirably, and adjourned the Congress in language most admirable and appropriate. The Congress was a great success.——Savannah, Ga., is the theatre of a devastating epidemic of yellow fever; the deaths have reached 39 per day, and the mortality 37 per cent. Brunswick, Ga., is sorely afflicted; more than one-half the population are ill with the yellow fever; few physicians left to do the work; one of these has 100 cases of fever to attend, including in these his wife and children. Supplies are badly needed. Where are the medical volunteers for this field? A few cases of the fever have appeared at Charleston, S. C. The disease is not epidemic there. At Baltimore a few suspicious cases of fever have occurred; the physicians do not regard these as cases of yellow fever. Two cases are reported at New York City; both from Savannah, Ga.——The Medical Colleges have reöpened. The classes in Louisville are fair; that of the Louisville Medical College is as large as it has ever been at this season.——*Repudiation of Cheap-fee Medical Colleges.*—A proposition is to be made at the next Convention of Medical Colleges for the repudiation on the part of the medical colleges of Boston, New York, Philadelphia, and Baltimore of the tickets of all of the cheap-fee medical colleges in this country. This is as it should be. The course of these cheap-fee colleges in selling their tickets for $40 and $50, or $100 less than the price asked by the colleges of Boston, New

York, Philadelphia, and Baltimore, is simply disgraceful. There is but one remedy, and it is for the colleges indicated to repudiate the tickets of all cheap-fee institutions. Students purchasing such tickets, or about to purchase them, will, it is hoped, give due attention to the facts here stated.——— The best hydrate of chloral is now resublimed.——The second edition of Roberts' Practice of Medicine has been issued by Lindsay & Blakiston.——Choleate of soda for the prevention of biliary calculi is now for sale by McKelway & Borell, 1410 Chestnut Street, Philadelphia.——The New York Floating Hospital of St. John's Guild, on August 2d, carried 1,193 babies on an excursion.——The next new hospital in Paris is to consist of one-story pavillions.——The University of Upsala has just celebrated its 400th anniversary.——The concours system has been abolished in the University of Paris.——Wm. Wood & Co. are about to publish the first volume of the Transactions of the New York Pathological Society.——Miss Martineau left her skull to Henry George Atkinson, of London.——The Medical Society of Virginia meets at Charlottesville on October 17th. ——A bronze statue of Livingstone has been erected at Edinburgh, Scotland.——Twenty-nine physicians are members of the Chamber of Deputies in France.——The great Chelius has just died at Heidelberg.——Austria has just compelled the use of the metrical system in medicine.——The Medical Press uses this department of this Journal very generally and very extensively, and as a rule gives no credit for it. They are welcome to publish all the facts given, and especially the last.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The International Medical Congress of 1876.—This Body has commanded during the past few weeks the thoughts and attention of the greater part of the civilized medical world. It

is really wonderful to see how generally foreign governments were represented. It is said that with the exception of France every civilized country of any position had its delegates in Philadelphia. As a rule, it is believed they were more than pleased, and astonishment seemed with them as prominent as gratification. The American representatives were exceptionally excellent, though a large number of the best physicians of this country were necessarily absent. The meeting seemed, by general consent, to have been an entire success. It is generally conceded that the President, Dr. S. D. Gross, of Philadelphia, did honor to his countrymen, as well as to himself, and he certainly "won golden opinions from all sorts of people."

It is the mission of the Press, however, to be analytical as well as general in its notices, and, as a rule, it ought to be "nothing if not critical." As there will, of course, be another Centennial meeting in this country in 1976, and as it will, of course, be in Philadelphia, and as the comments of this Journal will, of course, be very valuable at that time, a few hints will not be inopportune here.

In the first place, the physicians of the Quaker City should take a lesson from Colonial times for Centennial uses, and honor their guests more and themselves less. They should not, on the next occasion, be found, as recently, officers on most of the sections and committees, and should not monopolize as many of the positions of honor and usefulness. Foreigners should receive a large share of these places, and the South and West should not be so entirely repudiated. Boston should be allowed to be a little "hub," at least, next time, and not occupy again the position of a spoke only in the Quaker's wheel. New York should not be snubbed, and made to feel that after all she is not the medical centre of this country, at least when weighed in Philadelphia balances. These little bits of advice will (if heeded, as of course they must be), in 1976, make their repetition unnecessary, and secure for the fraternity of the Quaker City more unqualified praise than they can receive in 1876; though they have received much, and deserve much.

It may be, however, that in 1976, Keokuk will be the medical Philadelphia of this country, and will snub the medical

magnates of Duluth and Alaska, and those living in the cities bound together by the Southern Pacific railroad as comically as did the Philadelphia of 1876 send Boston and New York doctors home for another supply of starch and assumption; the atmosphere of the Schuylkill certainly destroyed these. Keokuk will, at least, not help herself to the largest slices in the Centennial feast, or make old fogies charge her with imitating the Centennial City of the preceding century. This Journal will, of course, be then, as it is now, "takin' notes," and "faith it will print 'em." Its junior editor, now four years old, will, at that time, have his tombstone, lichen-covered, lying prone in some deserted church-yard, while Gross, of America, Lister, of Scotland, and Barnes, of England, with their brother magnates, will, like Cæsar, have "turned to clay," and be known only in biography as active members of the INTERNATIONAL MEDICAL CONGRESS OF 1876.

The Yellow Fever.—In no epidemic of this scourge has its portability and its communicability been more thoroughly demonstrated. While one may certainly say that it "destroyeth at noonday," it can not be said that, "as a pestilence, it walketh in darkness," for its arrival and the course of its visits are clearly discernible. The proportion of the population attacked, and the mortality exhibited are very unusual. In Brunswick, Ga., nearly all the inhabitants are now ill, or convalescent, or dead; few, indeed, have escaped.

In such calamities, the Medical Profession have been fearlessly and heroically at the front; in the midst of danger; working to the last, and either dying at the post of duty and of honor, or returning crowned with glory and blessed with gratitude. Where are the volunteers for these new fields of duty and of danger? Norfolk stands a perpetual testimony to the heroism and devotion of the Profession. Savannah and Brunswick now cry aloud for aid. Shall their cry go unheeded, or will brave medical soldiers give the old response, and be marshaled to the fields of danger and of duty? Who will place their names on the medical muster-roll and hold themselves in readiness to march?

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ARTICLE I.—*Exophthalmic Goitre—with a Case.* By J. P. THOMAS, M. D., Pembroke, Ky.

Taking the literature of this disease as a criterion by which to judge of its frequency, it is plainly a very rare affection, as there are, comparatively, very few writers upon the subject, and they devote but a very limited space to its consideration; in fact, there seems to be little known in regard to this, one of the most singular combinations of disease of which we have any knowledge. It is really triplex in character, there being three affections in one.

As to the pathology and morbid anatomy of "Basedow's disease," it is almost a sealed book to the Profession, as far as I have been able to judge, from the literature on this subject. There seems to have been very few post-mortems, and these give so far only negative results, and contradictory in character; at least such are my conclusions after a careful and patient investigation of all the literature within my reach.

The anatomical changes, as reported by different observers, are unsatisfactory, on account of their diversity and lack of uniformity; no two agreeing in this respect, and specially in reference to the condition of the heart, which is evidently the principal seat, if not the origin of the other two diseased conditions; more than one observer consulted, asserting from careful auscultation that there is no organic disease of this organ, that

all the cardiac phenomena are purely functional. This statement may be correct, and no doubt it is, *per se*, but it does not always continue so if the disease is prolonged. Another declares that there is nearly always valvular disease, and often hypertrophy of both sides; others state that the veins and arteries are only enlarged, etc.

Prof. J. F. Meigs, in a very clear and lucid clinic on this affection, attributes to psychological phenomena the cause, or rather causes, of this disease, at least in the six cases, of which he briefly gives the history, as falling under his observation and professional care. In all except the last, he seems to attribute to mental anxiety, consequent upon domestic troubles, the symptoms resembling in this respect (in nearly all his cases) hysteria in some form, requiring the same moral treatment, etc. In this latter suggestion I agree with Dr. Meigs, but the moral management of this affection is not more imperatively demanded of us than in many others; especially those occurring in females. And just here I would state as the sum of my knowledge (which is very limited on this point), that I have never heard of but one case of true Basedow's disease in a male. In this as in all other diseases in which the nervous system becomes implicated, as Dr. Meigs remarks, "The mind should be kept as tranquil as possible." "Hope must be infused into the patient's mind by cheering encouragement, by pleasant society, by patient and continued assurances that time and treatment will *probably* overcome the evil." So it will perhaps, if, as was evidently the case in Dr. Meigs' cases, the central organ of the circulation does not become organically diseased; for this occurs in the majority of fully developed and *prolonged* cases. But Dr. Meigs, like his predecessors and successors, fails to give us much light on the pathology of the malady, except the hypothesis that there is some loss of power in the controlling influence of the vaso-motor nerves, allowing the heart to act with unusual force and frequency, and permitting the arteries of the neck to undergo, for the time being, a larger diastole than is their law in the healthy state.

All this, though true, is very indefinite and unsatisfactory. The question still stares us in the face, and calls for an answer.

What produced this loss of controlling influence of the vaso-motor nerves? Not mental or "pathic heart" trouble alone, as the Doctor intimates. This may aggravate and intensify the disease (as no doubt it does), but it is not certainly the cause. Dr. Meigs' experience is as large if not larger than that of any American of whom I have any knowledge, and his lecture will well repay a careful reading. His treatment is not only rational and scientific, but embraces all the essentials that offer any hope for cure, in the present state of our knowledge of this strange and anomalous disease.

Dr. Meigs does not mention the galvanic current from which, as my experience teaches me, there is more remedial power than in any other one remedy. He lays great stress on confinement to bed, but this is contrary to the views of many other able clinicians, and among the number one of the most practical of this continent, Prof. N. S. Davis, of Chicago. His lecture will be found in the "Philadelphia Medical Times" of 1873.

I do not expect to be more fortunate in dispelling the darkness that envelops the pathology of this affection than have been my *more able* predecessors; for this would be presumption in one whose whole experience and observation are embraced in a single case; but notwithstanding this limited experience, I will not hesitate to present the conclusions at which I have arrived, after a careful study of this case for six years before death terminated the patient's sufferings, and my anxious solicitude; it being in the person of a personal friend. This fact, and the rarity of the disease, of which a careful record was kept, together with the complications that presented themselves from time to time during the progress of the disease, made the case memorable to me. Of these symptoms, there were several to interest the medical mind, if I had but the descriptive power to portray them with that sufficient clearness necessary to a proper appreciation of each.

The priority of the discovery of the peculiar association of symptoms, observed in this affection, is claimed alike, I believe, both by Graves, of Dublin, and Basedow, of Merseburg, Germany; to whom the credit properly belongs, I am unable to say, but from the few authorities consulted, I am inclined to

the opinion that it is due the German. Oppölzer claims it for Basedow, but he himself is a German; for which due allowance will be made.

The malady consists, essentially, of three distinct affections, unquestionably connected, invariably associated, and accompanying each other, sooner or later; embracing exophthalmus, bronchocele or goitre, and cardiopalmus.

There is, of course, a cause for this peculiar combination of diseases, as there are causes for all other morbid actions in the organism. From the statements of the few observers consulted (with their recorded experience) and from my own observation of this unique case, I am convinced that this combination of diseases proceeds from a single cause.

"At first," says Oppölzer "there were no important changes in the heart or large blood vessels found, or at least observed and recorded, until Dr. Stokes discovered the vessels to be enlarged and very tortuous." He says that some writers have observed the left ventricle slightly dilated and hypertrophied; and that valvular incompetency has been noticed in many cases; but the alterations in the circulatory apparatus have been regarded as accidental complications, and not properly connected with (or necessarily the result of) the disease; because in other cases, or post-mortems, none of these lesions were noticed; and for the reason only that death resulted from some undiscovered complication, before the disease reached this point of degeneration. I agree with this observer that the exophthalmus proceeds from a hyperplasia of the cellular and fatty tissue of the posterior orbital surface, because this is evidently the cause of the prominence of the eyeball; the dilatation of the blood vessels behind the bulb, causing increased nourishment, and, as it were, an increased growth of fatty tissue in this locality; and because, from a careful observation of the disease in its entire course, there are no phenomena observable by which this protrusion of the ball can be attributed to a flow of blood to the brain, or to pressure on the trachea by the thyroid; producing thus a "popping" of the eyes, as in strangulation by hanging. On the contrary, the feeling imparted to the fingers or palm of the hand pressed against the lid so as to force the balls back-

wards is that of a soft yielding cushion of cellular tissue; and post-mortems have demonstrated this to be the true condition of the parts.

One writer (Taylor) lays great stress on the dilatation of the blood vessels behind the bulb, and seems to consider the protrusion as due somewhat to a sort of anastomosis of the blood vessels in this locality, although he speaks of the hyperæmia of the tissues.

All writers, I believe, agree in the statement that the blood vessels of the cervical region are invariably dilated and tumid; some contending that this condition of the arteries and veins is associated with the degeneration of the thyroid gland, and is the cause of its pulsations. The blood vessels in this locality are generally enlarged and swollen, or were in the case treated by me.

I can not, however, agree with the reviewer of Oppölzer's paper, that this enlargement is a true hypertrophy of the vessels involved, but that it is a dilatation produced by increased action of the heart, together with a partial obstruction to the free passage of blood through these vessels, pressed upon as these are by the enlarged thyroid. In regard to the symptoms noticed as attendant on this disease, there seems to be equally much contrariety of opinion; as much as is exhibited in regard to its pathology. This is especially true in reference to its initiatory stage. Oppölzer is of the opinion that the majority of cases are revealed, first by a troublesome palpitation of the heart, and that the other phenomena come on at a later period, the development of the thyroid being the first in order, and lastly, the exophthalmus. This agrees somewhat with the history of the case here reported, yet other observers state that the goitre is the first appreciable symptom; one writer reports three cases, in which this symptom was first observed. Others, and Oppölzer among these, in a few of his cases, noticed a reversal of this order of development. The commencement was of a nervous character only, and in some of the cases the hysterical phenomena preceded the disease by many weeks. The thyroid enlargement, as stated by some, was usually soft, but a few report it as hard and unyielding to pressure. The bruit, I

believe, is admitted by all. As to the lateral extension of the tumor, in contradistinction to other enlargements of the gland being the rule, all agree. Oppölzer says all the lobes take part in the enlargement, but that the lateral are more pronounced.

In some of the cases reported, there was excessive enlargement of the right lobe only; in others it was the left. The majority of writers speak of the extent of the enlargement as moderate, in comparison with uncomplicated bronchocele. The exophthalmus has been, in some few cases, observed only in one eye during the whole progress of the disease; in others, beginning in one, it would, as the disease advanced, extend to the other.

There is a case reported by Praël, in which the exophthalmus was for a long time unilateral, but subsequently it affected both eyes.

The ophthalmoscope has, so far as my knowledge extends, or so far as any of the authors consulted indicate, revealed no structural changes within the eye; some few mention some temporary deviations in vision. Scoch reported a case in which there was double vision and amblyopia.

There are various slight anomalies mentioned concerning the internal structures of the eye; in many cases there was marked dilatation of the pupils. A case has been reported by Gildermeister, in which there was mydriasis of both eyes, but this was of short duration, disappearing during the course of the affection. Others have discovered a peculiar condition of the lids, in Basedow's disease, in which they variously failed to respond to the movements of the bulb at the commencement and termination of every glance of the eye. Graefe considers this as diagnostic. I suppose this failure of the lids to adapt their movements to those of the bulb was only the result of their insufficiency to cover the eyeball, its condition impeding their movements. Graefe, on ophthalmoscopic examination, observed considerable enlargement of the retinal veins, which he says were broader and more tortuous than in their normal condition.

I find that no writer mentions the appearance during any stage of the disease of a white ring encircling the cornea; the

"arcus senilis." Dr. Bartholow is the only one who alludes to it, and he says his cases did not manifest it.

A great many neurotic phenomena are recorded by observers. Basedow mentions some singular psychical and hysterical symptoms, with irritability of temper, and at times great mental excitement. In some of his cases, he noticed an abnormal condition, which manifested itself in the frequency and haste of the movements of the limbs, facial expression, etc., with quick speech.

Dr. Cheadle, in a communication to the Harveian Society in June, 1869, gives some clinical observations in eight cases reported by him; six of which, however, only exhibited the leading features of the disease proper. In one there was no goitre; in another there was no exophthalmus. So we will exclude those, as they do not seem to have been cases of Basedow's disease. He is the only observer that I have read who reports a case occurring in the male (and only one of his six cases occurred in the male), but he says this case was fully developed and to a marked degree. No cause, observes this writer, could be discovered for the disease in this case. He attributes the other cases as in some way connected with disorders of menstruation. Five of his cases were but slightly anæmic; of the females, two were robust and full-blooded. The male was also robust, with no emaciation. In all his cases palpitation was the first symptom; rapid and forcible action of the heart in every case; pulse never under 100, and often as high as 144. He endeavored to discover some lesion of the cervical sympathetic by noting the difference in temperature of the two sides of the face, but could discover no appreciable difference, except in one case. In none of his cases could organic cardiac disease be made out. I doubt his diagnosis in the male. In this case the goitre rapidly disappeared, and other symptoms abated under the constant use of iodine externally and internally, and the cure was speedy. The result of treatment in the cases of the females are not reported.

This writer seems to consider that the hypertrophy of the orbital cushions and enlargement of the thyroid are explainable as the result of hyperæmia from increased cardiac action, but

he adds that "there must be a nerve stimulus at the bottom that sets the heart going at such an unwonted pace. That the excessive cardiac impulse is the key to the series of phenomena, but that it was necessary to seek the nerve source of this increased action of the heart and circulation."

Though there had been some morbid changes discovered in the cervical sympathetic on post-mortem examination in a number of cases, these changes were quite inadequate to explain all the phenomena. He thought the sympathetic system was in some way involved or implicated largely in the production of the malady.

Dr. Morel McKenzie reported before the Clinical Society of London, in 1868, four cases of this disease, all of which were females. In all of his cases, swelling of the thyroid was the first symptom; all were young women, but in all the menstrual functions were performed regularly. One case only was benefited by xv. m. tinct. digitalis thrice daily. One proved fatal early. Others still under treatment; no improvement from treatment when reported. In the post-mortem of Dr. McKenzie's fatal case, the pathological appearances are thus given: "The substance of the cerebral tissue was not unnaturally soft, nor were there any clots or embolisms anywhere; but the corpora quadrigemina and medulla oblongata, particularly its posterior part, were very soft. A minute examination displayed the usual appearance of common softening."

The patient, five days before death, had maniacal fits, and just before death a mild convulsion, both of which were probably produced by the sanguineous fluid which was found (to the extent of a drachm or two) in each lateral ventricle, and by the softening of the medulla oblongata. The heart seems to have been healthy, except some atheroma of the mitral and aortic valves, as well as some thinness of the latter, and the coats of the aorta and pulmonary arteries. The thyroid was much enlarged, and its right lobe passed around and behind the œsophagus and came in contact with the spinal column. Its structure showed hypertrophy of the cellular elements. The inferior thyroid arteries were much enlarged.

Dr. C. Handfield Jones reported a case before the Royal Medical

and Chirurgical Society in 1860, which he termed "Proptosis with Goitre and Palpitations, etc." This case is chiefly interesting as giving the views of so high an authority as Dr. C. J. B. Williams, and because these differ so far from those of other observers, especially as to the results of treatment. He said he "knew no class of cases more curious or more peculiar in their prominent symptoms than the one referred to by Dr. Jones in his report, nor any in which the effects of treatment were so striking." An experience contrary to that of most authors. He said that "the pathology of such cases had at *one time puzzled* him much," and I must say he failed to unravel the puzzle to the satisfaction of any one but himself. He said "on account of the peculiar combination of symptoms, the prominent and throbbing vessels of the forehead, head, neck, and face, I consider the pathological character of the disease to consist in a *kind of aneurismal varix of the thyroid.* And that enlargement of the vessels would account for the prominence of the eyes, which were probably in some cases rendered more prominent by effusion into the orbit. That the whole cerebral *circulation* was in the same state of *enlargement*, producing excitement and other symptoms of disturbance of the brain. This state depending on diminution of nerve power, and not on increase of nerve power, explained the *wonderful action* of tonics in this disease. He had treated several cases, all females, and in *all* his cases the disease yielded happily and promptly to astringent tonics, such as the sulphate of iron with excess of sulphuric acid. A very bad case recovered in a few days under this treatment."

This is very high authority, and comes from a very distinguished clinician, but his experience in the treatment of this disease is greatly at variance with that of the majority of observers, his results being much better than those of any other reporter using any and every form of treatment.

Professor Bartholow read a very excellent paper on Exophthalmic Goitre before the Section on Practical Medicine at the meeting of the American Medical Association in 1875. But he is rather contradictory, when he says in the commencement of his paper "that no case of Graves' disease can be considered

complete, without the presence of three characteristic symptoms—irregular and rapid action of the heart, enlargement of the thyroid and exophthalmus;" for a few sentences further on he says, "but many cases are met with in which but one or two of the typical symptoms are present." Again, in the second paragraph, he says: "It is equally certain that many cases of so-called goitre are really examples of Graves' disease," the enlargement of the thyroid only attracting attention. This may be so, but the other symptoms must have been extremely trivial, or the patient and physician very deficient in observation.

I have treated several cases of bronchocele with palpitations, incident, as I thought at the time, to anæmia; there were also anæmic murmurs, but no exophthalmus. I did not then, nor do I now, consider these cases as cases of genuine Basedow's disease. Possibly the alterative and tonic treatment pursued may have arrested further development. Dr. Bartholow is dissatisfied with the term "exophthalmic goitre," as failing to express always the true pathological condition present. This is because he does not consider it necessary to have the three phenomena present to constitute the affection proper. But if we require or insist upon the development or appearance of the three recognized as characteristic symptoms to complete the diagnosis, there can be no name so admirable, so expressive of the whole group of phenomena.

I believe with Drs. Meigs and Bartholow that there is evidently some lesion of the sympathetic system of nerves (as well as the spinal accessory); but I believe also with Virchow that there is a cause for this lesion, and that the central lesion is strumous in character, which seems to be proven by the results of a tonic and alterative treatment, as reported by various observers. I fully agree with Dr. Bartholow (from my own experience with the remedy) as to the beneficial results to be expected from the constant galvanic current; but I do not think that it should be relied on to the exclusion of other remedies, such as digitalis, iron, and the hypophosphites and cod-liver oil.

Dr. Octerlony, of Louisville, Ky., has an excellent and able

paper on Basedow's disease, with a report of several cases, according to my recollection, but as that number of the "Richmond and Louisville Medical Journal" containing it has been misplaced, I can not give the Doctor's views on the pathology of the affection.

Dr. Chisolm, of Baltimore, reports an incomplete case of Graves' disease, in which there are some points of special interest, one of which is, as the author remarks, its divergence from the assumed type. The persons affected, says Dr. Chisolm, "are usually young chlorotic females with irregular or suppressed menstruation." This is not necessarily so, as there are many cases not chlorotic, and in whose cases there has never been any derangement of the menstrual functions, while some have been robust and full of red blood. His own case belonged to the latter class. This may have been an undeveloped case of Graves' disease, but in my opinion it was not a case of exophthalmic goitre proper, but one of simple bronchocele, with probably a few unusual symptoms. No treatment is given, nor the result nor termination of the case.

I am convinced that there are many cases of simple goitre treated as exophthalmic, and thus cures are increased. But as the principal object of this paper is to present the history of a very peculiar case of this very peculiar disease, with several complications and psychological phenomena (as noted and now presented by request of several medical friends), I will, with this hasty résumé of a portion of the literature of the affection, endeavor to present it; but I do so somewhat in detail, with the hope that it may, to some extent, awaken more interest in what I consider a very obscure and most singular disease; and with the additional hope that it may be the humble means of stimulating more able investigation into its true pathology and causes. Virchow's cellular pathology will have to be studied in this connection more fully; and Schwan's doctrine; and Bichat's; and "Heitzman's plasma doctrine"; or, as Dr. Elsberg proposes to name it, "bioplasm doctrine." The careful study of this doctrine promises much for pathological research, and it may account for the hypertrophy of the thyroid, and probably the increase of plasmic material behind the orbit, as well as the increase of the

heart in well-developed and long-continued cases of exophthalmic goitre. The study and application of this doctrine promise to enable us to recognize some diseases by the microscopic examination of a few colorless blood corpuscles before the disease itself is developed, thereby enabling us to prevent rather than cure disease, which is much more desirable. I may go further in my expectation, and hope it may reveal to us the nature of the deposit or whatever morbific agent may be the cause of the lesion of the ganglionic or sympathetic system. I am very much interested in the study of this doctrine of Heitzman, which is as good a name for it as protoplasm or bioplasm; for, as observed by Dr. M. B. Wright, in a note, or rather correction, to a very able but plainly expressed article on Cephalic version in the "American Practitioner":

"I have no room for the newly-coined phrases with which the Profession is so heavily burdened. Indeed, I begin to fear that our profession will be, ere long, concealed under the rubbish of an unknown tongue. Even now the thoughts of the later generation are conveyed to the fathers in a sort of pantomime."

It is to be hoped that this microscopic study of the living and healthy tissues will be diligently applied to a like study of all diseased tissues, and thereby possibly enable us to note not only the changes that take place by diseased action in general, but the peculiar special change occurring in each separate disease, as well as the character of all morbific deposits or agents producing each disease.

Miss Annie W., aged seventeen years and six months; *very* light hair; blue eyes; full habit; well developed for her age; weight 135 pounds; temperament nervo-lymphatic; complexion blonde; rather cachectic in appearance, but lips red and a slight rose tinge on cheeks. In good circumstances, financially; a petted child of doting parents, and naturally of a happy disposition. Had been irregular in menstrual functions since puberty; some dysmenorrhœa, for which she had received treatment from time to time; was an habitual "snuff-dipper" since the age of eleven years. Very imprudent as to the care of her health; was often very nervous from the effects of snuff, the villainous and pernicious habit being common among the young

girls in the neighborhood. Had been attending boarding-school for the past eight months, when her father was informed by the Principal of the illness of his daughter. She was immediately brought home, and I was sent for to see her, which I did on the 5th of February, 1867, at night. Found the patient with some fever, complaining of sore throat; said she was taken with a chill three days previously to my visit, after playing snow-ball and eating a quantity of snow, when her throat became very painful, with constant headache; had no chill since. On examination, I found the fauces much inflamed, but no enlargement of tonsils or ulceration; patient very nervous with slight palpitation. Prescribed comp. cathartic pills, with a gargle of chlo. potassa, and turpentine externally, twenty grans of quinine in four doses, one every three hours, after which no further treatment was considered necessary.

On the 7th of February, two days after first visit, I was again summoned to see her. I found distinct enlargement of both lateral lobes of thyroid gland with increased palpitation, and pulse 110. The palpitations and nervousness I attributed to the use of tobacco, and pronounced the case goitre. The gland was painted with tincture of iodine. The throat symptoms had disappeared. Bromide potassa, with the iodine, thrice daily, was ordered; tinc. digitalis, 10 drops, twice per day. The thyroid continued to increase notwithstanding the continued application of iodine up to March 4th, when she was attacked with acute bronchitis, with considerable dyspnœa.

On the tenth day after the supervention of bronchitis, an undue prominence of the eyes was, for the first time, noticed. The balls of both eyes were distinctly protruding; no emaciation; palpitations more frequent; increase in both lateral lobes of the thyroid, with perceptible prominence of the isthmus; suppression of menses for one period. Under tonics of sulphate of iron and sulphuric acid, with the addition of the following—

℞—Decoct. Senega, ℥vj.;
Iod. Potassa, ℥j.;
Bro. Ammonia, ℥ss.;
Aqua, ℥xij.;
Tinc. Digitalis, ℥vj. M.

Sig. One teaspoonful ter die, with continued application to thyroid, she gradually improved, with a reduction in the bronchocele. No palpitations, except on exertion, for over two months, when the exophthalmus increased to such an extent as to render a closure of the eyelids impossible, yet there was apparently a continued decrease in the goitre. Menstruation was established at the end of the third month by the administration of tinc. antacrid. in doses of twenty-five drops thrice daily for fifteen days preceding a period. The bronchial complication persistent; cough at times distressing, notwithstanding systematic treatment addressed specially to the lung affection. Only slight loss in flesh up to this time. May 20th, weight 125 pounds, but no permanent improvement in the course of the malady.

May 20th.—Considerable irritability of stomach for a few days without vomiting, when almost constant vomiting of bilous matter occurred, resisting all treatment, for about ten days, when it ceased. All medication, except an occasional hepatic, was omitted. The liver was perceptibly enlarged and tender on pressure. After cessation of the vomiting, the appetite returned. This, as should have been stated, was morbidly voracious, craving acids and the most indigestible aliments, with a diseased taste for chalk, slate-pencils, etc.

May 30th.—Eyes more prominent; pulse 140 and bounding; thyroid much smaller; considerable emaciation; weight 105 pounds; respiration hurried and panting; bruit distinct and thrilling; feet œdematous. She was placed on a pill of extract belladonna, $\frac{1}{4}$ gr.; sulph. iron, ij. grs.; sulph. quinine, ij. grs., ter die, with xv. m. tinct. digitalis twice daily, and daily seances with an ordinary two-cell battery applied over the sympathetic and to the pit of stomach. Occasionally one pole was applied to the tumor.

June 10th.—Pulse 130. After this time and under this treatment the pulse decreased in frequency, and the goitre diminished in size, and by the first of August she could close the lids almost naturally.

August 20th.—Pulse 96; heart sounds greatly lessened; eyes more natural; goitre not more than half the former size; ap-

petite more healthy; anæmic condition improving; gaining flesh rapidly; cough less annoying; expectoration nil; can take moderate exercise without dyspnœa, but if she ascends the stairs produces extreme panting with suffocative respiration. With intermissions of a week in the application of the galvanic current and alterations of the prescription from one preparation of iron to another, according to condition of stomach, with a continued administration of some one of the bromides or iodides, with valerian, etc., and with proper restrictions in diet, as far as practicable with a self-willed patient, and moderate exercise in the open air, she continued slowly to improve up to February 14, 1868. Before this period she had grown tired of the galvanic current, which had been applied according to my instructions by a member of the family. About this time, from some unacknowledged cause, probably from excesses in diet and exposure to cold, being passionately fond of fishing (would sit for hours on the bank of a creek or pond, often with her feet in the water, and fish), she grew suddenly and rapidly worse, all the symptoms reäppearing with, if possible, more intensity. The thyroid increased until each lateral lobe closely approximated the size of an orange, though more flattened in form. The pulse was often beyond my ability to enumerate, reaching beyond 160. Heart jarring the whole thorax, and distinctly audible in any part of the room; pulsations in thyroid decidedly aneurismal; bruit loud and thrilling to touch; eyes simply frightful by starting and protruding as if they would burst from the orbital cavities. For the first time there was persistent and stubborn diarrhœa, resisting for a considerable time all treatment; cough frequent with muco-purulent expectoration; emaciation rapid. Area of cardiac dullness marked, especially on the left side; some mitral regurgitation; anæmic blowing of the carotids; œdema of feet and ankles; urine albuminous by nitric acid test.

March 4th.—Had continued very much in this condition, when a half circle of a white line was first observed on the upper border of the cornea, which grew from day to day more distinct, and continued to extend around the cornea. In a week it had entirely surrounded the cornea, and was a distinct white

circle about a line in width; was as distinct in one eye as the other, encircling the cornea of both eyes, and this never afterwards entirely disappeared. Extreme nervousness continually, and at times hysterical symptoms, as had been the case from the beginning of the attack. But on this renewed onset of the disease, there were developed a series of psychological phenomena that I have not seen noticed by any writer on this affection. Phenomena that amount to the marvellous, and which I should hesitate to relate on this account, if my statement could not be vouched for by living witnesses. First, from having been one of the most truthful and moral, and as little given to gossip as any of her sex, she became possessed with the demon of untruthfulness, constantly fabricating some marvellous story, of which she was always either one of the principal actors or an eye witness, after the style of Gulliver; often telling the most slanderous stories on her neighbors, and even her kinsfolk; sometimes reporting to me the alleged ill treatment of her parents, when there never existed parents more indulgent and affectionate. They were, I may say, foolishly indulgent to their children, and yet she would relate to me, always in a whisper, how her mother had grossly maltreated her, and that her father had, on several occasions, "slapped her down"; and on one occasion "had actually knocked her down stairs." By way of illustrating the many marvellous stories she would relate to her visitors, as well as her physician, I will give one in her own words. She had a very lovely and amiable cousin, a young lady remarkable for her many good qualities of head and heart. For a long time, without cause, the patient seemed to entertain for her cousin an uncontrollable dislike, and as if in a sort of spirit of revenge, she called me to her bedside one day, and said she desired to tell me of a sight she witnessed the other day. "I was down at the pond fishing, with my shoes and stockings off and my feet in the water (not an unusual thing for her to do), when, on looking to the opposite side of the pond, I saw my cousin fishing also. After a while a big black negro man seven feet high came out of the woods and approached her, and at once commenced hugging and kissing her, doing so repeatedly, and she offered no resistance, and did

not seem to object to his embraces. But after a while he espied me, and instead of going around the water, he waded in, coming directly to where I was sitting. When he had reached about the middle of the pond, I became frightened and ran as fast as I could to the house, and my heart has been swelling and has been ready to burst ever since."

The pond alluded to was in the centre of a very large field, and no woods near, and her cousin was absent from the neighborhood at the time on a visit to an aunt in a neighboring town some fifteen miles distant, and yet she seemed to believe fully that what she was relating was an actual occurrence; yet she was rational in all else. She again improved, with a tonic and sustaining treatment, taking several bottles of the glycerole of hypophosphites, but this character of delusions or hallucinations possessed her mind for five or six months; gradually she dropped them, and finally when reminded of the wonderful stories of which she had been the author, she refused to believe that she had ever told them, and especially the one concerning her cousin, of whom she was really very fond.

She was during *this* period even perfectly rational on all other subjects, except this special propensity for slandering her friends, and for the marvellous. Meigs, Bartholow, and others seem to attribute the exciting cause to domestic or financial trouble. In this case there was no disappointment in matters of the heart, and no cause of a mental character to produce or excite the disease.

There was evidently a strumous diathesis, and with the experience of this as the only fully-developed case of Basedow's disease, I am inclined to the opinion, as before stated, that Virchow's theory is the most probable and plausible; that it is a struma. May not a strumous deposit in the ganglia or nerve centres of the sympathetic system produce the lesions that seem to be evidently present in the vaso-motor nerves, causing a sort of paralysis of said centres, and consequently (by their want of influence) the cardiac disturbance, etc. But, as remarked by Dr. Jewell, "the average ignorance of the Profession is concentrated on the nervous system," and I may add the cause for every departure from health is bound to originate in this much accused portion of the organism.

From March to November, she continued to improve, with tonics, electricity, cod-liver oil, hypophosphites, etc., with occasional treatment addressed to the kidneys, which often were deranged in action. At times they were inactive, at other times active, amounting frequently to diabetes insipidus; but no sugar could be detected in the urine at any time. On several occasions there was dropsy of the lower extremities, extending, on one occasion, to both labia and continuing for three or four weeks, but invariably disappearing on exhibition for a short time of some tonic diuretic. Though not properly scientific, yet among this class of diuretics I have found none equal to the following:

℞—Hydrocloric Acid, ʒjss.;
Potass. Nitras, ʒv.;
Sulph. Quinia, ʒjss.;
Tinct. Canth., ʒij.;
Ol. Teribinth, ʒvj.;
Ol. Pip. Nig., Mxxx.;
Brandy Oij. M.

On November 20th I was informed by her mother that there was great swelling of both labia. On examination found them enormously œdematous; feet and legs dropsical. With the above prescriptions, this effusion rapidly disappeared, after which her improvement in general health was steady; gaining flesh; reduction in thyroid, eyes not so prominent, but cardiac dullness increasing, palpitations more frequent on the least exertion; heart's action so forcible as to jar the whole thorax; mitral murmurs distinct. Digitalis and aconite were added; given alternately, with apparently beneficial effect; with this addition to the general treatment before indicated, notwithstanding the continued increase of cardiac dullness, the throbbing of carotids, and the noises in the ears (which latter were very annoying) her general health improved up to May 5, 1869, when after a horseback ride of twelve miles and some imprudence in diet, she was attacked with excessive diarrhœa and severe precordial pain (angina pectoris). Treatment, galvanic current; one pole over cervical sympathetic and pneumogastric; the other over heart; seance thirty minutes; when a belladonna

plaster was applied over cardiac region; astringent and anodyne enema.

May 6th.—Circulation better; pulse only 110; complains still of precordial pain; but dull in comparison; nausea and vomiting, with dyspeptic symptoms; not much improvement in the diarrhœa; bismuth, tannin and carbolic acid.

May 8th.—Much better apparently, except constant and continued pain in region of the heart, which the plaster had failed to relieve. Blister applied and strict quiet enjoined. Hysterical; afraid to be touched; said if any one touched her she would break all to pieces.

She was kept confined to bed for two months, when again the improvement was decided. Afterwards moderate exercise was allowed, and the foregoing treatment alternately employed; steady improvement was the result; even the heart's action decreased; the arc around the cornea faded. She continued to improve during the whole of this summer, 1869.

This "arcus senilis," Dr. George B. Wood's diagnostic of fatty heart, was a very prominent and persistent symptom in this case throughout its entire course, and really seemed to hold some relation to the other symptoms, as it would fade on improvement, and again become distinct on the aggravation of the malady.

Dr. Wood mentions this zone or arc as a valuable diagnostic sign in some cases of fatty degeneration of the cardiac walls, though as stated by him as early as 1858, it had been found to be a fatty degeneration of the cornea, *per se.;* but that Mr. Canton had observed it to be generally attended with some affection of the heart. My lamented friend and preceptor, Dr. E. B. Haskins, of Clarksville, Tennessee, as quoted by Dr. Wood, found only two cases in his observations of twelve cases of "arcus senilis" that offered any symptoms of organic disease of the heart.

Dr. Wood says: "In the very old, this affection of the cornea may be considered as a normal change in the tissues, incident to declining life; but in the young and middle-aged, it must be taken as indicating a morbid state of the system, such as also probably disposes to fatty degeneration elsewhere. Haskin's

article in "American Journal Medical Sciences," N. S. XXV., 107.

I have observed, since the investigations of Haskins, ten cases of this circle around the cornea, in both old and young, and carefully examined each case for disease of the heart, and in only one case did I find any organic alteration of this organ. This was in an old negress, aged seventy-eight, with general dropsy. I diagnosed fatty degeneration, being satisfied without this symptom (or sign) that the heart was the cause of the dropsy. She died suddenly, and the post-mortem revealed a heart enormously enlarged and almost entirely fat, with atheroma of the aorta. After this seeming digression, I would state, by way of apology, that I make this quotation from an old author, because I am inclined to the opinion that the fatty cushion behind the orbit is due to a general tendency in this disease to fatty degeneration, obstructing probably the coronary artery, and possibly depositing some morbid material in the ganglionic nerve centres, notwithstanding the almost constant anæmia attending cases of this affection.

Treatment continued during the summer and fall, with occasional intermissions in medication for a month or more. Thyroid remaining stationary in spite of the introduction of the constant galvanic current after Neftel's plan, by attaching a sharp needle to each electrode and puncturing the tumor, with the application of iodoform ointment, iron, and iodoform internally for months together; pulse ranging from 100 to 140; respiration always quick; exophthalmus about the same, and was such a source of great trouble and annoyance to the patient that she would place compresses over the eyes with a bandage at night to enable her to cover the balls with the lids. Often, during the course of the disease, the latter would become very sore and inflamed along the tarsal borders, which sulph. of copper always benefited. She remained in this condition with occasional attacks of dyspepsia, suffering greatly with acidity of the stomach, unable to retain any nourishment, except uncooked eggs or some bland diet, with pepsin wine, nux vomica, and bismuth as aids to digestion. The latter often controlling the frequent attacks of diarrhœa better than any other remedy.

Alternating in this way, losing flesh rapidly and in a short time regaining it, up to July, 1871. During this month dropsy was again developed as before; menstruation became obstructed; very nervous; pulse from 100 to 150; very fretful and peevish to all around her. She had been free from any special mental aberation for a long period. She now became hypochondriacal, in the same mental condition as before described, with the addition of a want of confidence in every one, seeming to suspect all about her as having some design upon her life. This condition continued until about the 10th of September; all dyspeptic and bowel symptoms having disappeared; her appetite was good and bowels regular; hepatic functions sufficiently active. About this time she had an attack of intermittent fever, and owing to idiosyncrasy against quinine, was permitted to have five or six chills before they were arrested. But remarkable as it may appear, after the chills were arrested, she began to improve at once, and with a sort of combined anodyne, tonic, and alterative treatment consisting of iron, iodoform, digitalis, belladonna, strychnia, electricity, hypophosphites alternately and intermittingly (at times leaving off all medication), she improved in all respects, except the heart affection, which continued. When perfectly still and quiet, there seemed improvement here also. The mind improved and delusions left her. She was cheerful, and for the first time appeared to be contented with her condition; appetite good and healthy; no dropsical effusion; bowels regular; discharges healthy; thyroid remained stationary as to size; no change in exophthalmus; and as Dr. N. S. Davis remarked concerning one of his patients with Basedow's disease, she "approximated a cure." A sort of chronic condition was established. She visited her friends comparatively comfortably, with the exception of the dyspnœa. This panting was a constant attendant, as though she was overburdened with flesh. The heart beats were constantly audible to any one within a few feet of her.

May 26, 1872.—Another bronchial attack with pericardial pain. Blister over lungs and heart, with treatment addressed to bronchial affection; soon arrested both pain and bronchitis. From this time until the 6th of January, 1873, her general

health continued comparatively good. At this time she was attacked with tonsillitis, with very marked increase in the thyroid. After recovery from the throat affection, she again had persistent diarrhœa. Goitre gradually increasing; the bruit more distinct than ever; cardiac dullness distinct in every direction, but more so at the left; respiration distressing, she often calling for more air, and requesting to be fanned; arcus senilis increased in width; chlorotic, anæmia, and emaciation extreme; bellows murmurs apparently in every valve of the heart; pulse weak, but ranging from 110 to 160, and often beyond computation; thyroid pulsating with an expansive bound of great force and continuous; carotid pulsations far greater than the radial as to volume; an audible whizzing sound is at all times distinct in thyroid without the aid of a stethoscope or close proximity of the ear. No appetite; regurgitation of what she tries to eat; extreme acidity of stomach; diarrhœa resisting all treatment; no hysterical manifestations whatever; mind calm and collected. Says she "is willing and anxious to meet death." Profuse diuresis; urine clear and limpid; fæcal evacuations destitute of bile pigment; heart can be distinctly felt and heard to the left just below the clavicle and within two inches of the left axilla; valvular whistling very distinct. It is remarkable that none of the bromides, with even moderate doses of chloral, gave any relief or produced sleep, and that only a ten or twenty minutes' seance with the galvanic current produced quiet and procured rest.

She continued in this condition, with slight modification of the symptoms, for a day or two at a time, until April 2, 1873, when she died of insufficiency of the heart and general exhaustion. She was completely cyanotic. The exophthalmus remained after death.

Summary.—On the 3d day of February, 1867, this young lady was taken ill while at boarding-school. On the 5th I was called to see her; found only sore throat with some fever; rather nervous. Did not recognize the nature of the case; had not up to that time seen a case; had never read any description of the disease, except a short extract from Basedow's paper and Graves' account. Did not think a second visit necessary; but

on being again summoned only two days later, the goitre was the first condition that attracted attention. Still considered the palpitation as due to depression of the nervous system from the use of tobacco. Considered the case as one of simple bronchocele.

Nearly a month elapsed before the exophthalmus was visible, or at least before it attracted the attention of the family or myself. There was suppression of the menses several times for one, two, or three periods during the course of the disease. The gland often decreased in size, only to enlarge again, even under treatment. Occasionally the action of the heart improved. There were repeated attacks of bronchitis; none very unyielding to treatment however. Dyspepsia a prominent complication; diarrhœa another. There were three separate attacks of violent cardiac pain, which only a blister would relieve. Hysteria in almost every form. Very remarkable hallucinations; in this respect the psychological phenomena were very singular; and her long-continued relief from not only this form of mania, but from all hysterical symptoms before death should be noted. The long time that elapsed after the onset of the malady before the appearance of the corneal circle, and its fading on improvement, and increasing in distinctness on every increase of the other symptoms; also its persistence to the close, are all worthy of note. The pulse rate never under 90, no matter what the improvement. This was manifest throughout the disease; the pulse being often, I believe, up to 200. The exophthalmus remained nearly the same, and no recedence of the bulbs after death. Scrofulous sore eyelids apparent frequently in the course of the affection, and the remedy, sulph. cupri, being all that benefited them. The complication of dropsy, where there was no discoverable disease of the kidneys, was remarkable; the heart must have been the cause, and yet it disappeared a long time anterior to death, and did not return.

The effects of treatment almost nil. The hypophosphites had a more beneficial influence than any other internal medication. The constantly beneficial effects of electrical treatment points conclusively to innervation of the nervous system, and should be specially noted. The entire absence of any source of mental

trouble in the young lady's domestic or social relations (as this seems to occupy a prominent position, as an exciting cause in the personal history of the majority of cases reported) should be noted. In this case there was evidently extreme hypertrophy of the heart, especially the left side, and probably fatty degeneration, as the systole became more feeble for some time before death.

It is astonishing that so few observers report any organic change in the heart. It seems reasonable to expect hypertrophy, at least in all cases of long continuance, from overwork alone as a sufficient cause. The disease of this organ, when it exists, may be in this way coïncident, and only the result of continued and prolonged excitement of the central organ of the circulation. It would appear rational to conclude that prolonged functional disease would finally result in organic change.

Since concluding this article, I have received a business letter from a medical friend and former pupil, in which he incidentally mentions his treatment of a case of this disease, and on account of the novel mode of treatment, I will give it in his own words. His success is equal to that of Dr. C. J. B. Williams; but I doubt the correctness of his diagnosis.

"I have *cured* a very severe case of exophthalmic goitre. The young lady seemed on the very threshhold of death. She was examined by a score of M. D.'s, and she says every one pronounced it incurable, except myself. I put her on Lugol's solution, and used hypodermic injections of compound tincture of iodine, 15 drops at a time. I made only five injections, repeated every fifteen days."

So, judging from this, she was cured in seventy-five days. This is rapid, novel, and somewhat heroic treatment, but its results, if the case was not one of simple goitre, justifies the boldness exhibited. My case may have recovered but for the complications and the imprudence of the patient. The enforcement of hygienic treatment in her case was an impossibility.

ART. II.—*Elastic Rubber-Ring Tourniquet.* By ARTHUR ED. SPOHN, M. D., Corpus Christi, Texas.

I noticed an article in the American edition of the "London Lancet" for August, 1876, on "An Improved Appliance for Bloodless Operations," which purports to be an improvement made by Mr. H. L. Browne, Surgeon to the West Broomwich Hospital.

As the subject of elastic-ring tourniquets has been attracting my attention for the past six years, during which time I have made many experiments with the same, I can not, in justice to myself, allow said article to pass unnoticed, as it seems to me impossible that the use of said tourniquet, which has been on exhibition in many of the principal cities of America, been shown and explained in several prominent hospitals and before several medical societies, should not have reached Mr. H. L. Browne; however, should the use of the elastic rings have been conceived by Mr. Browne independently and without knowledge of their use in America, I can not, of course, take any exception to said article.

The rings used by myself and shown to the Profession consist of a set of nine, six of which were precisely similar to those described in the "Lancet," with three smaller rings for the thumb and fingers, which completes the set as made by Geo. Tiemann & Co., of New York, the following being an extract from a letter from that firm, dated June 17, 1875: "Regarding your new idea of rolling-rubber rings for Esmarch's operation, we think the idea is capital. It must be a remarkably quick process and so simple." Again they write me: "New York June 29, 1875. We just now finished a number of your new tourniquet rings. The idea strikes us as really excellent.'

In a communication of October 15, 1875, they write: "You must publish them—the sooner the better—before others may catch the idea."

My elastic-ring tourniquet was exhibited at Charity Hospital, New Orleans, La., to Drs. Choppin, Schuppert, and Smythe, October, 1875; at the Boyle County (Ky.) Medical Society, September, 1875; at the city of Hamilton, Canada, in August, and at the January (1875) meeting of the Southwestern Texas

Medical Association, of which I have the honor to be Vice-President, thus placing the general knowledge and use of the instrument pretty well before the Profession.

The following is an article forwarded for publication in the "New York Medical Record," February, 1876, but as it was not published, I suppose it must have been miscarried or lost:

A New Elastic Rubber-Ring Tourniquet.—As so many new surgical instruments are now brought before the attention of the Profession, it almost seems necessary for me to offer some apology for introducing a new tourniquet for bloodless operations, also for general use where such instruments are indicated. This instrument I have called the "elastic rubber-ring tourniquet." The necessity for such an instrument was brought to my notice when residing in the city of New Mexico, while attempting to remove a needle from the thumb of a young lady, April, 1870. Having made several unsuccessful attempts, on account of hæmorrhage, I wound an ordinary elastic band around the end of the thumb, and rolled it back beyond the site of the needle, noticing that the thumb was completely bloodless, presenting a waxy appearance, which enabled me to remove the needle without difficulty or loss of blood.

The idea of an elastic ring tourniquet for bloodless operations did not then enter my mind, nor indeed until I noticed the favorable reports of the instrument devised by Professor Esmarch, and in using his instruments for the removal of a thorn from the knee of a young man October 7th, 1874. I thought a simpler method might be adopted by using solid and hollow rubber rings of assorted sizes to fit every limb, and requested Messrs. George Tiemann & Co., of New York, to have a set made for me, which really surpassed my expectations, easily adjusted and perfectly controlling the circulation. The rings described in the "Lancet" are precisely similar to the first set I had made (the smaller of which is for the fingers and wrist) were perfect; but in applying the rings to the thigh, I found the solid rings would not roll well, especially in cases of considerable obesity, and by the advice of my partner, Dr. T. Somerville Burke, I had the larger rings made hollow, which, I believe, is a decided advantage, making them roll with greater

facility, also preventing the hairs from rolling around the ring, which is to be avoided, as it is the cause of much pain.

In applying the rings, one side may be raised to pass painful or diseased parts, or the ring may be stretched and thus placed above the seat of the part injured or diseased, thereby avoiding the entrance into the circulation of septic fluids, an objection which has been made against the use of the elastic bandage.

The simplicity of this instrument will, I believe, at once recommend its general use, whether for bloodless operations or as a simple tourniquet. I find that very little elastic pressure is necessary to control the circulation even in the stoutest subjects, and by using a very weak ring over the arm outside of the ordinary clothing, I have rendered the whole limb perfectly pulseless, a fact that would make such an instrument invaluable on the battle-field, where numerous lives are sacrificed by the inability of most persons in applying the ordinary instrument now in use.

In using the tourniquet, that part of the instrument lying over the main artery should be raised before closing the wound, so that in case there is any hæmorrhage the vessel may be ligated or twisted. The rings for the arm and forearm should fit the wrist firmly; those for the thigh and leg, the ankle.

The great advantage I claim for this instrument is its simplicity and facility of application, forcing the blood out of the limb gradually in its direct channel without injuring the tissues, which must necessarily occur in using the bandage, which is rolled around the limb, leaving, as it must, blood between the different turns of the roller, producing on many occasions ecchymosis from injury done to the minute capillaries.

I have applied the instrument many times upon my own arm, rendering it perfectly blanched and bloodless, and have never felt the least inconvenience after using the strongest rings.

There are many cases for which I might recommend this instrument, but believe it will suggest its own use whenever necessary to prevent loss of blood, or the entrance into the circulation of any poisonous matter which may be brought in contact with the extremities, as dissection wounds, bites of animals, reptiles, etc., by stretching a firm ring and placing it above the poisoned part.

To say more, would simply be a repetition of what has already been published regarding the advantages derived from the use of the admirable instrument devised by Prof. Esmarch, of which I consider my rings an improvement, trusting they may be of some service to the Profession, and those who may be so unfortunate as to require their use.

The above, I trust, will satisfactorily explain the origin and use of the "Elastic Rubber-Ring Tourniquet" first used by myself in 1870, and manufactured by George Tiemann & Co., of New York, June 1875; not that I wish to claim priority over Esmarch in the use of the elastic tourniquet, but to show that the "Elastic Rubber-Ring Tourniquet" was used by myself, and brought before the notice of the Profession in America at least two years previous to the publication in the "Lancet," describing an instrument precisely similar to those manufactured for me by Tiemann.

Cases in which I have used the instrument successfully:

Case I.—A young lady consulted me March 16, 1875, for contraction of one of her fingers, caused by a whitlow. The finger was perfectly useless, being drawn down into the palm of the hand. I rolled a ring over the hand as far as the wrist, rendering it perfectly bloodless, made a V-shaped incision, and divided all the adhesions drawing the finger down. There was *not a drop* of blood lost, enabling me to complete my dissections without injuring the tendons. I straightened the finger without difficulty, applied a palma splint, and in a few weeks she recovered perfect use of her finger, and at the present time the deformity is scarcely perceptible.

Case II.—On the 15th of October, 1875, a young man came into my office suffering severely from the effects of a splinter deeply embedded in the palm of his hand. Several unsuccessful attempts had been made to remove it, but the hæmorrhage obscured a thorough examination of the parts involved. I have no doubt but the elastic bandage would have answered equally well in this case, but having one of my rings with me, I rolled it over the hand and removed the splinter without difficulty or the loss of blood. After removing the ring a little hæmorrhage occurred, but not sufficient to require attention. I

have since used them many times on similar occasions, with good success; also in amputation of fingers, etc.

CASE III.—On the 4th of July, while firing the midday centennial salute, Mr. Stanley Welch, Deputy Collector U. S. Customs, District of Corpus Christi, had his right hand and part of the forearm blown away by the accidental discharge of a cannon. He lost considerable blood, which was difficult to control until I placed one of my rings over the arm near the shoulder, when the hæmorrhage immediately ceased. The forearm was amputated near the elbow, and although the instrument was not rolled up, but applied as an ordinary tourniquet, there was no hœmorrhage during the operation. He made a quick recovery.

I may here state to show how little *elastic pressure* is necessary to control the circulation, that after Mr. Welch's arm was dressed, there was considerable oozing from, I think, a small vessel we omitted to ligate. One of the surgeons in attendance wished to reöpen the stump, but by my advice a weak ring was placed around the arm above the stump. It controlled the hæmorrhage, but made too much pressure, becoming painful. It was replaced by a very weak elastic band, which I had found very useful in similar cases, answering equally well; also beneficial in keeping the parts in apposition, moulding as it were one upon the other, an improvement on the ordinary mode of dressing.

It seems impossible to estimate the *elastic force* necessary to control the circulation; and in my experience, which extends over several years, I find very weak rings are quite sufficient for any operation, nor do I consider the plug, as shown in the "Lancet," of any use whatever; on the contrary, the vessel is apt to slip to one side or the other, and rest in a notch between the plug and ring; a small rubber pad might be used over deep-seated vessels, but I think the rings alone are sufficient.

This instrument is manufactured by Messrs. Geo. Tiemann & Co., No. 67 Chatham street, New York.

NOTE.—The rubber rings used by me and made by George Tiemann & Co. of New York, are of nine sizes, as follows: No. 1 is made of solid rubber cord one eighth of an inch thick; the ring measuring in its diameter from outside

to outside four-eighths of an inch. No. 2 is also of solid rubber cord of the same thickness; this ring measuring five-eighths of an inch in diameter measured from outside to outside. No. 3 is of solid rubber cord also; measuring from outside to outside seven-eighths of an inch; this cord is a little thicker than that used for Nos. 1 and 2. No. 4 is of solid rubber cord one-fourth of an inch thick; the diameter of the ring measuring from outside to outside 1¼ inch. No. 5 is of solid rubber cord three-eighths of an inch thick; the ring in its diameter from outside to outside measuring 1⅞ inch. No. 6 is also of solid rubber cord three-eighths of an inch thick; the ring from outside to outside measuring 2⅛ inches. No. 7 is of hollow rubber tubing half an inch in diameter, the rubber composing this tube being one-eighth of an inch thick; this ring measures in its diameter from outside to ouside 2¾ inches. No. 8 is also of hollow rubber tubing three-fourths of an inch in diameter; the rubber composing the tube being three-sixteenths of an inch thick; this ring measures in its diameter from outside to outside 3⅝ inches. No. 9, the largest ring, is made of rubber tubing 1 inch in diameter, the rubber being one-fourth of an inch thick; this ring measured in its diameter from outside is 4½ inches.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART I.—*Puerperal Convulsions.* By HIRAM CORSON, M. D., Conshohocken, Pa.

In the "Medical and Surgical Reporter" of June 3d there is a paper on this subject by Dr. Wm. T. Chandler, of Kentucky, who speaks with great positiveness in relation to its nature, and some scorn in reference to its treatment. As we write for the benefit of the Profession, and not to eulogize each other, I trust he will tolerate mild criticism.

His patient had "alarming cerebral hyperæmia," which means, I suppose, that not alone the large arteries and great sinuses, but also the small vessels and capillaries of the brain, were dangerously distended with blood. To relieve this distension, he says: "I extracted about sixteen ounces of blood, to relieve the alarming cerebral hyperæmia by diminishing the amount of blood, and at the same time lessen the irritating effect of the urea upon the nervous system." One unaccus-

tomed to bleeding, if he draw the blood into a flat-bottom basin, will fancy that there are "about" sixteen ounces when there are not more than six or eight ounces. He began to bleed his patient, under the strong conviction that if he could draw the blood from the brain so as to reduce it to its normal fullness only, the danger from distension would be wholly removed, and the amount of urea so diminished that it would be harmless to the nervous system. A just conclusion, but how timid his actions. He looked into the basin to see when he had drawn sufficient blood, instead of looking at his patient's face, feeling her pulse, and regarding her general condition. What was the result? That the brain was left in the same condition as when he began to bleed. He was disappointed. "The bleeding," he says, "did no good, either as regards the coma, or the severity or the frequency of the convulsions"; *per contra*, "the symptoms of brain pressure seemed rapidly augmenting; stupor became more profound, and nervous insensibility more marked." I hope my readers will look closely at what the doctor is doing here, for on this case he bases the positive conclusions with which he closes his paper. He began to bleed to relieve alarming hyperæmia and diminish the amount of poisonous urea, and yet, before he had drawn enough to give the least relief to the oppressed brain, he stopped the flow, although, he says, "the stupor was not relieved, but became more profound and the nervous insensibility more marked." Why did he not continue the flow of blood until the changed pulse, the blanched face, the relieved stertor, the awakened nervous sensibility proclaimed that the alarming hyperæmia was removed? Was that a trial, a test of the value of bloodletting? And yet, after this drawing of a few ounces of blood, this same practitioner, in his conclusions, given on page 444, says: "When the indications are, however, to relieve cerebral hyperæmia, it (bloodletting) is demanded to prevent a laceration of the cerebral vessels and effusions in the brain tissue"; and then adds: "I am certain that it is an unreliable procedure for controlling puerperal eclampsia, and however well it may appear in theory, in practice it will almost generally prove a failure." How contradictory are those utterances. First, it is "demanded" to prevent lacera-

tion and effusion. Second, he is "certain" that it is an unreliable procedure.

I will now refer him and my readers to an excellent practical article in the "Reporter" for July 1st, by Dr. Isaac Scott, of Virginia, by which bleeding is shown not to be unreliable. Dr. Scott thinks if Dr. Chandler, instead of taking "about" sixteen ounces, had really "taken forty-eight or sixty-four ounces, he would have seen a very different effect from the bleeding." Dr. Scott gives two very bad cases, in which nearly a gallon of blood was drawn in one case, and sixty-four ounces in the other, and both convalesced rapidly; and he adds: "I could mention a number of other instances in which free bleeding had fully as happy a result as is the foregoing cases." And further says, he never knew one injured by too much bleeding, but has "seen a number of cases do badly that were bled but little or not at all." Dr. Scott talks like one who has seen much practice and different kinds of treatment.

In addition to this testimony of Dr. Scott, that bleeding is not an unreliable remedy, allow me to refer your readers to the article in the "Reporter" of August 5th, by Dr. Wm. Faulkner, of Erie, Pa. He refers to Dr. Scott's paper, and says, "I heartily endorse his treatment. My experience teaches me that we have no more valuable agent in the treatment of this formidable complication of the lying-in chamber, and that we have no other remedy, or combination of remedies, with which we can as promptly protect the brain from injury and prepare the case for the best influence of chloroform and the speedy relaxation of the os." And again, he says: "It is not enough that we *know* what our most efficient remedies are; we must also know how to use them in the very best possible manner." We have much denunciation of bloodletting, now-a-days, by men who have never drawn a drop of blood, and others who have made a few timid trials of it, while those who have had much practice in the measure are a unit in testifying to its great value in the treatment of many affections, and especially in the one before us.

Many years ago I published in the State Transactions a detailed account of every case of puerperal eclampsia which I

had then met with in my own practice. In 2,387 consecutive labors, I had only nine cases of puerperal convulsions.

Here let me digress a moment to notice another writer on this subject. Dr. R. L. Moore, of Wisconsin, in the "Reporter" of August 26th, says: "With all due respect for those gentlemen who have lately written and spoken on the subject, I would honestly ask if any patient ever recovers who is stricken with what we term puerperal eclampsia? I mean puerperal eclampsia, pure and simple, with no hysteria about it, and like the case reported by Dr. Chandler in your number of June 3d." Dr. Scott's cases well answer those questions, and I am happy to add my own testimony, that every one of my cases got well, and every one of them was bled copiously, some of them enormously.

Dr. Moore is impelled to say: "I boldly aver my skepticism as to those remarkable results attained by 'never-lost-a-case' reporters, and confidently predict that they will lose the very first case of *real* puerperal eclampsia that they may be called upon to treat."

It is now thirteen years since I published my other cases, during which years I have been in active practice; have had cases of my own, "pure and simple, *real* puerperal eclampsia"; have also been with cases with my medical neighbors; have bled them all; have not in any case forcibly dilated the os uteri, yet all recovered. I hope this report, joined to those by Dr. Scott and Dr. Faulkner, will cheer Dr. Moore and his friends, and animate them to the use of such means of cure as are spoken of by those who must decline his invitation to "report their *fatal cases*," inasmuch as they have not yet any to publish.

Here I might stay my pen were it not that there are all over this vast country practitioners who, like Dr. Moore and his friends, have had no success in the treatment of puerperal convulsions; no fixed convictions in relation to the cause of them, and consequently no positive plan of treatment. Too many young mothers are lost by the physician's reliance on some specific. Brom. pot. has been the death of scores of patients by standing in the way, and occupying the time, precious time,

which should have been given to other means. Chloral is a better agent, so is chloroform, but they are scarcely safe in those cases like Dr. Chandler's, of "alarming hyperæmia," unless preceded by copious venæsection. You never need be afraid in those cases to draw blood freely; do not draw it in a broad-bottom basin, and then when you have drawn six ounces, fancy that there are *about* sixteen ounces, and then close the orifice, though every symptom that indicates the necessity for further loss of blood is staring you in the face. Like Dr. Scott, I have never seen one suffer from too much bleeding. Bleed freely, and repeat, if necessary; unload the bowels of irritating contents; apply ice to the scalp in a bladder; pound ice, fold it in a towel and lay it under the head as a pillow, then use chloral, or morphine, or chloroform, the first and last in preference in most cases, and leave the labor to itself if the mouth of the uterus be not dilated. If you have saved the brain all will be well. One of the severest cases, most persistent, that I ever had, occurred within five minutes of delivery and continued for thirteen hours. If you have bled the patient so the brain is saved, you can hold in abeyance the uterine irritation till natural efforts at delivery are made, or until the parts are prepared for delivery by the forceps.

ART. II.—*The Climatotherapy of, and the American Mountain Sanitarium for, Consumption.** By STANFORD E. CHAILLÉ, A. M., M. D., Professor of Physiology and Pathological Anatomy, Medical Department, University of Louisiana.

The influence of climate in the treatment and prevention of consumption has been recognized from the earliest times; yet, though many errors have been corrected, the problem is still far from having been thoroughly and satisfactorily solved. No

* As this is the season when consumptives are endeavoring to obtain useful and reliable information, this article will be read with profit as well as with interest.—E. S. G.

such solution can be hoped for until additional researches have furnished the data indispensable for absolute conclusions. The premises now lacking for such conclusions are to be sought for in a full knowledge of the various morbid processes still classed under the single title of Consumption or Phthisis Pulmonalis—and in an equally full knowedge of the Vital Statistics and Meteorology of every section of the earth's surface. Those who have most studied the subject are also those who are best convinced that climatotherapy is still in its developmental stage; and that pathologists, vital statisticians, meteorologists, and hygienists have enormous labors to accomplish, before the physician can hope to realize from the influences of climate on disease the immense benefits destined to be secured.

A glance at the causes now at work to promote this desirable result is calculated to inspire hope. Among these promoting causes, none are more potent than those universal civilizers and humanizers, steam and electricity, which are daily increasing our knowledge of every inhabited nook of the globe. Within the past thirty years, the foremost nations have developed some appreciation of the social and political importance of vital statistics and meteorology, and there are hopeful evidences that, while the most civilized States are nurturing the seeds of this still inadequate appreciation into matured fruit, the less civilized will be awakened to some realization of the importance of the subject. An additional encouragement is found in the increasing conviction of the Profession, that the physician, in the discharge of his duty to patient and society, must keep in mind that "air, water, and locality" deserve from him, as they received from Hippocrates, primary consideration; and that therapeutics must depend more and more on hygiene. Finally, the rapidly growing literature of the subject, the publication at Leipsic of a Quarterly Journal, and at Vienna of a Year-Book, especially devoted to it, forcibly indicate that potent causes are in operation to solve our doubts and perfect our knowledge of climatotherapy.

With little lore or practical experience in the subject, I still venture to call attention to some of the results of modern researches upon the influence of climate in consumption.

One need not to have become gray-haired in the Profession to recall the period when it was generally taught that mild and uniform climates, even tropical seashores, as Madeira, Florida, Cuba, etc., were those best adapted to consumption, and that malarial regions were especially favorable. These beliefs were so generally and firmly established, that, though long since proved erroneous, physicians are still to be found who credit them. Statistics have proved that warm countries exercise an unfavorable influence on consumption, tropical countries the worst, and that as a general law the disease diminishes as we pass inland, to the north, and from the low to the high lands.

The delusion that malaria acts favorably on consumption, is practically important, especially to the inhabitants of malarial regions, and deserves constant refutation until wholly abandoned. It owes its existence, in this section of the United States, to a misinterpretation of the fact that in our southern cities the proportion of annual deaths to the total annual deaths by consumption is generally less than in the northern cities. This fact is indisputable, and its misinterpretation not less so. This misinterpretation is due to failure to compare the total number of annual deaths of these respective cities with each other; and to ignorance of the fact that the test of the mortality by any given disease in a given place is to be found in the proportion of the annual deaths by said disease *to the total population*, and *not to the total deaths*. The reader can free himself permanently from this source of serious and oft-repeated errors, if he will carefully digest the following illustration: In 1873 New Orleans had 200,000 population, 7,505 deaths, and 850 of these were by consumption; while the same figures for San Diego county, California, were 9,000 population, 53 deaths, 13 by consumption; now, if the comparative mortality by consumption in these two places be tested by the delusive ratio of consumptive deaths to total deaths, then New Orleans lost only about 11 in every 1,000, while San Diego lost about 24; and hence the hasty and absurd conclusion that New Orleans was more than doubly as favorable to consumptives as San Diego; but, if the true test be applied—the ratio of consumptive deaths to population—it will be found that in San Diego there died by

consumption only $1\frac{1}{3}$ persons to every 1,000 population, while in New Orleans more than four of such deaths occurred; and hence the true and indisputable conclusion that three times more people died in New Orleans by consumption than in San Diego. Those who can not master such simple arithmetical premises and conclusions—and there seem to be a good many of these unfortunates—are strenuously urged to eschew statistics altogether and forever.

Abandoning the consideration of long-credited errors, and reserving the consideration of the important influence of altitude on consumption, some of the general conclusions which seem to be well founded may now be stated. It is conceded that in cases far advanced, no benefit can be expected from change of climate, and that our ignorance of the climatic requisites is such that an aggravation of the symptoms ensues as frequently as their amelioration. It is as fully conceded that in the early stages, and above all as a prophylactic, when the dreaded disease is threatening invasion, the influence of climate is preëminent in arresting it—generally prolonging life, often fully restoring health. It is also agreed that there is no one climate good for all cases and stages of consumption, and that the climate good for a given case in summer is often not good for the same case in winter; and that even the inclination, tastes, and habits of each patient should be consulted, for his contentment and happiness seriously influence his health.

It has been found that all nomadic tribes are remarkably exempt from consumption, while the pernicious influence of incarceration, inadequate ventilation, and deprivation of sunlight have been repeatedly illustrated upon caged animals, and most disastrously in the jails, ships, and barracks of human beings. In consumption, a life of exercise in the open air is essential to salvation. The seasons and places noted for sudden and frequent meteorological changes, or other conditions which confine the patient to the house, are the worst; and (other things being equal) those places are the best where life out-doors is permissible to the greatest extent. Another important indication, in determining for each case the change of climate desirable, is to be derived from the consideration of the season

and weather, which have been observed to exercise the best influence upon his general health and his special disease, and particularly upon his digestive, nutritive, and respiratory functions. The climate most appropriate for the case in hand is likely to be the one which presents these conditions. Thus Dr. Bennett, of England, has obtained in his own case the most successful results by travelling for years with "a thermometer in his pocket" to control his constant changes of temporary residence. With an hereditary tendency to the disease, the writer's general health has always been most vigorous when the weather has been cold, the air dry, and the atmospheric pressure diminished, therefore if threatened with consumption, I should promptly and unhesitatingly remove to a climate which furnished these conditions.

Dr. C. T. Williams, in his Lettsomian Lectures upon "The Influence of Climate in the Treatment of Pulmonary Consumption," recently published (1876) in the "British Medical Journal," states the following results of his statistical researches, which are particularly thorough as to the health resorts of England: "A bracing though gusty climate avails more than a mild, still, and somewhat relaxing one; and instead of seeking for a sedative atmosphere to allay the cough and reduce irritability, we should in most cases select a stimulating one to increase the appetite, and to invigorate the system of our patients."

Parkes, in his admirable work on Hygiene, states: "I have been astonished to find how well even phthisical persons will bear great changes of temperature if they are not exposed to moving currents of air."

Dr. Williams also asserts that "in all forms and degrees of phthisis the dry climates are the most likely to arrest the disease," and "for the ordinary forms of consumption, a dry air, whether inland or marine, is better than a moist one, inland or marine, cold or hot." While many authorities concur in the superiority of dry to moist air, there are none the less some who assert with equal positiveness the reverse. In fact, the evidence on this point is conflicting, and this is no doubt due in part to the fact that humidity is a relative term, and that the

degree of humidity has not been studied nor stated with sufficient precision. The force of authority is strongly to the effect that while a relatively dry atmosphere is the best for consumptives, yet that neither excessive humidity nor excessive dryness of air are favorable; and that very damp air, if cold, is markedly unfavorable. In this connection, allusion must be made to the recent (since 1860) valuable researches of Bowditch, of Massachusetts, and Buchanan, of England, on the influence of subsoil drainage in preventing consumption. It has been satisfactorily proved that dampness of the soil, from which aerial humidity must result, is an important cause of phthisis to the population living on such a soil; and that the prevalence of the disease can be, and has been, notably diminished simply by attention to the proper drainage of such wet soils. Even prior to these satisfactory researches, the fact was recognized that sandy, porous soils exercised a better influence than the alluvial, impermeable ones.

It is not my purpose to discuss the influence of diet in consumption, but there are some prominent facts which can not be avoided even in a discussion solely of the influence of climate. For instance, all agree that whatever be the climate, the introduction and assimilation of the largest quantity of nutritive food is of the utmost importance; and many are disposed to ascribe the happy influence of certain climates solely to their beneficial effects in promoting digestion and nutrition. Others claim that the favorable results obtained in certain places are directly dependent, not on any peculiarities of their climate, but on the peculiarity of their diet. For instance, Iceland, the Faeröe Islands of Denmark, and the Kirghiz-Steppes of southeastern Siberia, enjoy, it is said, an absolute immunity from consumption. The nomads of the first feed especially upon fats and oils, of the second upon fish, and of the last upon koumiss or fermented mare's milk, and to these peculiarities some would attribute their immunity. It is certain that professional experience throughout the world testifies favorably to the benefits of fish oil, and that the Russians have introduced and advocate the use of koumiss. The milk-whey, skimmed milk, and other such dietetic cures, deserve remembrance in this connection.

It also deserves to be noted that all of these peculiar diets are carbonaceous; and further, that some of the regions, as the Steppes of Tartary, said to enjoy an immunity from consumption, are below the level of the sea.

Among the several climatic factors which favorably influence consumption, there is no one of them of such preëminent importance as altitude, no one of them in regard to which professional opinion is so strongly and unanimously expressed. Though long known, that Quito and some other mountain cities were exempt from this disease, the knowledge is comparatively recent that these special facts indicated the general law that high altitudes, in whatever country found, enjoyed a like exemption. If the investigator climb high enough—whether the Andes of South America, the Sierra Madres of Mexico, the Rocky Mountains or Apalachians of the United States, the Alps or Apennines of Europe, or the Himalayas of Asia—the altitude can be found where consumption is unknown, and where the threatened victim of the lowlands can gain such health and prolongation of life as neither doctors nor drugs could secure him.

What is this health-giving altitude? No fixed numbers measure it; varying with different circumstances, it may be found in one place at 2,000 and in another at not less than 8,000 feet above the level of the sea. What are the different circumstances which cause these variations? All are not known, some will be stated. Latitude has a notable influence, for the further south the higher the desired altitude. Jourdanet thinks that it is generally to be found half way between the ocean's level and the altitude of constant snow; but this is believed to be an over-estimate, though a safe one. The desired altitude is higher on mountains near the coast than on those further inland; even on the latter it must be sought for higher on peaks on the border of, than on those more centrally located within such mountainous regions; and even in this case it is found higher in mountain valleys hemmed in by adjacent peaks than on an exposed mountain top or plateau. Humidity modifies the altitude; and since forests, as also the nature of the soil and its drainage, modify the hygrometric condition of the air, therefore these affect the question of altitude. It is not doubted that

there are other modifying causes, as yet inadequately understood; those given should suffice to warn against a hasty conclusion as to any special place, from considering the sole fact of altitude exclusive of other important conditions.

On what do the benefits of altitude in consumption depend? On this point authorities are not in accord, but it is safe to say that these benefits must depend upon the climatic differences between the mountains and low lands generally. On mountains the variations of temperature, from summer to winter, from day to night, have a smaller range than on sea-levels; and as the smaller range of these variations is less in southern than in northern altitudes, it is said that lofty tropical altitudes are the best. It is also said that there are generally more clear days on mountains, especially in the winter, hence greater encouragement to life in the open air, and therefore the important benefits which result from such a life. But the three most important characteristics of mountain climates are the greater purity, dryness, and rarefaction of the air. The prime importance of atmospheric purity in the prevention and treatment of consumption is fully recognized, and has already been referred to, as has also been the importance of dryness of the air. The influences of diminished aerial pressure—the only characteristic peculiarity of mountain climates—remain to be considered, it being prefaced that this subject has not yet been sufficiently studied, and is not thoroughly understood.

In a rare atmosphere the respirations become more frequent, attempting (it is asserted, ineffectually) to compensate for the diminished quantity of oxygen; they also become more ample, owing, at least in part, to the diminished aerial pressure, both on the thoracic parietes, whereby less resistance is opposed to the inspiratory expansion; and on the inner surface of the lungs, whereby greater play for the expiratory elastic recoil of the air cells is permitted.

This greater respiratory activity, increased both in frequency and amplitude, reäcts—as respiration by anatomical and physical necessity must always do—on the heart, and thereby greater force and rapidity is given to the circulation. While the general circulation is thus rendered more active, the diminished

pressure on the surface of the body tends to increase peripheric capillary circulation. The increased activity of the circulation is supposed to be beneficial in consumption, and does probably explain, at least in part, the well-established fact that mountain climates unfavorably influence diseases of the heart.

Professor Paul Bert, whose physiological experiments on influence of barometric pressure deserve the utmost consideration, confirms Jourdanet and others in the assertions that the less the atmospheric pressure the less the quantity of oxygen in the blood, and the less the amount of carbonic acid and other products of oxydation; but the freer becomes the exosmodic excretion of such amount of these oxydized products as are formed in the economy. Bert asserts further that asphyxia can be produced by diminution of the aerial pressure or tension, even though oxygen be introduced into such tenuous air in disprotionate and superabundant amount. This diminution of the oxygen, in the air and in the blood, is termed by Jourdanet a "respiratory diet," and in it he finds satisfactory explanation for the immunity from phthisis in high altitudes. Lombard urges that a "carbonic plethora" is produced by the diminished oxydation, and in this seeks to find a common explanation, both for the benefits conferred by altitude, and for those derived from the various carbonaceous diets. Lombard calls attention to other striking and instructive facts—viz., that the physical and chemical influences of rarefied air, which cause exemption from phthisis, are noted for producing emphysema; that emphysema, however produced, is antagonistic to consumption, that the former is apparently a natural means for curing the latter; and that a physician who seriously proposed to relieve the one by artificially producing the other, was by no means deserving of ridicule.

Since rarefaction of the air, whatever may be its other effects, does facilitate the exosmosis of the liquids and gases of the body, it must tend to promote appetite and nutrition. Farther, the dryer as well as rarer the air, the more active is evaporation; and as this process withdraws heat as well as fluids from the body, it necessarily increases the demand for supplies of food. By such considerations it can be explained why alti-

tude increases respiration, circulation, appetite, and the nutritive processes generally; and yet, I think it must be admitted, that there is too much vague generalization about all this to explain satisfactorily the admitted fact that altitude does exercise a special influence on those special morbid processes designated as consumption. Therefore be it understood, that I have cited the supposed facts as to the influence of rarefied air, not because entirely satisfactory to me, but in order that the reader might be as fully informed as my own inadequate knowledge permits me to render him.

Though causes be obscure, results must be admited. Germany, in science the pioneer of nations, has been the first to make a practical application of the facts stated by establishing, as early as 1854, a mountain sanitarium for pulmonary diseases. The success which followed encouraged the foundation of others, and not less than five are now in successful operation, viz., at Goebersdorff, Prussia; Reichenhall, Bavaria; Aussee, Austria; and at Davos, and St. Moritz, Switzerland. The English have sanitaria in the Himalayas, the Italians in their mountains, and some exist in the Peruvian Andes. Dr. Williams gives the warning that the Alpine and Andean sanitaria supply such wretched food that they do not deserve patronage, until they learn to furnish that essential in the treatment of consumption —an abundant, well-cooked, and appropriate diet.

The facts now stated indicate how much more highly climatotherapy and mountain sanitaria are appreciated in Europe than in the United States. But American enterprise in the practical application of knowledge is unsurpassed, and as accessibility to our mountain regions increases annually, it is believed that it will not be long before the Profession and the public will awake to the importance of providing fit mountain resorts, especially as preventives against consumption, a disease which causes one-eighth of all our deaths, and annually destroys about three in every thousand of our population.

Before considering the advantages which the United States possess in this regard, it may prove instructive to state that Central Asia (Thibet) possesses the loftiest and grandest mountain plateau in the world; 160,000 square miles in extent, at an

altitude of from 10,000 to 15,000 feet. What a field for future climatotherapic research! Our southern neighbor, Mexico, deserves careful study, and inspires great hope by its possession of the glorious table-land of Anahuac, from 6,000 to 9,000 feet above the sea, in which the City of Mexico sits enthroned at an altitude of 7,400 feet, and Popocatepel raises its snow-clad head 17,716 feet. If tropical altitudes be, as is asserted, the most favorable to consumption, then Mexico must become in the future a noted resort for wealthy American victims to this disease.

The United States possesses two sections of country worthy of special study in this connection. The "Great Basin of North America," between the Rocky and Pacific Mountains, consists of 150,000 square miles of table-lands and plateaus*, which range from 4,000 to 5,000 feet above the sea, and shoot from their bosom snow-clad peaks which mount skyward from 10,000 to 17,500 feet. From this section most favorable reports have come. Among others, Dr. S. E. Solly reports that Manitou, which abounds in valuable mineral springs, has proved to be highly beneficial to the incipient stages of consumption. It is situated at an altitude of 6,370 feet, and yet is 8,000 feet below the adjacent summit of Pike's Peak. It is within 5 miles of the prosperous town, Colorado Springs, and is 75 miles south of Denver, Colorado. It possesses five hotels, but no sanitarium is reported. Dr. Solly writes that "there is probably no climate in the world where out-door life is so thoroughly enjoyable through every season of the year as that of Manitou;" that the popular reputation of the climate has been injured (as, by-the-by, is the usual case with the mountain sanitaria for consumption) by the flocking of patients to it without discrimination or selection; and that the death of those suffering with extensive and progressing cavities has been often accelerated by the great and sudden change from the lowland to this climate. He reports, in addition, the following facts, which I specially cite because they are confirmatory of the experience of others as to

*Table lands are elevated regions of generally even surface. Plateaus are elevated regions of uneven, rugged surface, often with mountain peaks jutting from them. Steppes are the immense desert plains of Russia and Siberia, somewhat similar to our great Prairies.

the influence of high latitudes—that there is total exemption from asthma, while emphysema and heart disease are aggravated; and that, contrary to what has been heretofore supposed would be true, the hæmorrhagic cases of the disease are especially benefited, and that consumptives improve to the greatest extent, particularly during the winter.

Another mountain region of the United States, the various ranges and plateaus of our eastern Apalachians, not only deserves consideration, but our first study and chief interest, because of its greater accessibility and proximity to our chief centres of population. As the highest peaks rarely exceed 6,000 feet, while the average height of all the peaks is not more than 2,500 feet, and the plateaus are still lower, the Apalachians fail to arouse as sanguine hopes as their loftier and grander western brothers. But there are the best reasons for believing that many places will be found reaching an altitude sufficient to secure immunity from consumption, and therefore suitable for its treatment. The Apalachians attain their most lofty, rugged and striking development in Western North Carolina, where, between those two off-shoots the Blue Ridge and the Alleghenies, are to be found the fourteen peaks which constitute the Black Mountains. All of these exceed 6,200 feet, and the highest (Mt. Mitchell) reaches an altitude of 6,707 feet, rendering it the loftiest summit east of the Rocky Mountains. But these monarchs of the East are not alone in their grandeur, for in this same region are to be found the Great Smoky, the Unica, the Bullhead, the Saluda, the Craggy, and the Roan Mountains, which present (according to Prof. Guyot, of Princeton,) not less than thirty-six additional peaks, which exceed 6,000 feet in altitude. Having visited the Swiss Alps, and all the noted mountain ranges of the United States from Labrador to the Gulf of Mexico, the writer does not hesitate to testify that there is no mountain region in the eastern United States which equals in beauty and grandeur this sublime section of North Carolina, which roughly may be said to be embraced in a circle having Asheville as its centre, and with a radius of about 40 miles. A scientist, long engaged in the official exploring expeditions of the Rocky Mountains, stated last summer that he was but little less impressed by the lofty,

graceful, diversified, and imposing appearance of these noble mountains than by the higher peaks of the great giants of the West.

In this region, between the Blue Ridge on the east and the Alleghenies further inland, is a mountain plateau more than 2,000 feet above the sea; and here, in sight of the Black Mountains and their many ambitious competitors, is located the pleasant, healthy, and hospitable village of Asheville, with some 2,000 inhabitants, and the only mountain sanitarium in America. With three railroad lines attacking it from the East and one from the West, Asheville still sleeps undisturbed by the locomotive's whistle, and the newsboy's cry of telegraphic extras. Ancestral stages jolt along its quiet streets, and are not the only institutions which remind the city-denizen that he has surrounded himself with the ancient customs and manners of our revolutionary sires. Presenting from every point the most captivating scenery, this charming village, 2,250 feet above the ocean's level, looks down upon the famous French Broad, which plows its foaming way to the West through forty miles of rugged mountain gorges. Long noted for its agreeable climate* and great salubrity, consumption is almost unknown to its in-

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* NOTE ON THE CLIMATE OF ASHEVILLE.

Summary of E. J. Aston's Meteorological Observations of Temperature and Rainfall, for the eight years, 1867–1875.

MONTH.	Highest.	Lowest.	Mean.	Rainfall.	Month.	Highest.	Lowest.	Mean.	Rainfall.
January	67.	3.	37.3	2.4	July	90.	53.	71.9	4.6
February	69.	4.	38.9	4.4	August	88.	51.	70.9	4.8
March	75.	3.	44.8	3.8	September	86.	34.	64.	2.3
April	83.	30.	54.1	2.3	October	81.	24.	53.1	2.
May	86.	38.	61.5	4.	November	72.	7.	43.3	2.8
June	87.	54.	69.3	4.1	December	72.	-1.	37.3	2.7

"Mean temperature of spring, 53.49; summer, 70.72; autumn, 53.48; Winter, 37.87. During the above period of eight years, the thermometer but twice reached above 88° and but three times below 3°." The extreme range during the eight years was from the maximum 90° to the minimum—1°. The average annual mean of temperature was 53.9°, and of rainfall 40 inches. Situated at about 35° 30' latitude, Ashville has the summer temperature of St. Paul. Minn., 45°, and the winter temperature of Fayetteville, Ark., 36° of latitude.

habitants, and therefore here has been established Dr. William Gleitsmann's "Mountain Sanitarium for Pulmonary Diseases." Having in 1875 spent ten pleasant days in this Sanitarium, I have felt it a duty to report the results.

Dr. Gleitsmann, a Bavarian by birth and professional education, is the proprietor and physician in charge. I found him a highly educated and sensible physician,* so forcibly impressed with the benefits to be conferred by such an institution on threatening consumption and its early stages, that he had invested his means largely in this enterprise; and yet, somewhat to my surprise, I did not find him to be either an enthusiast or narrow-minded specialist, but as modest and sensible as every man of true science and sound culture should be. More than a good physician—for to the amiability of a kind-hearted man he adds the gracious courtesies of a refined gentleman. To Dr. G.'s attention and skill as a physician, to his just and kindly consideration as a man, I have no hesitation in recommending any patients with confidence. He has by force of the law a mate, who, fortunately for him and suggestively to society, illustrates the design of the law, inasmuch as she is in truth his *helpmate* Of German parentage and English education, Mrs. G. has no superior as the head of a household. While the scrupulous cleanliness, thorough ventilation and domestic comfort of her rooms, the cheerful aspect of her parlor, adorned with all the paraphernalia of social amusements, and the admirable discipline of her servants, aroused my admiration—this, three times daily when seated at her table, mounted to enthusiasm, and I fervently blessed the praiseworthy schooling which had rendered an educated lady an accomplished cook. My surprise was great to find, apparently buried in one of the unfrequented by-ways of this busy land, such a physician possessing such a helpmate

* In an interesting article in the January No., 1876, of this Journal, on "Pneumatometry," by Dr. Schuppert, the author, referring to Waldenburg's Pneumatic Apparatus, says it is "an instrument which I herewith introduce into this country." Long prior to this announcement Dr. Gleitsmann had this instrument in daily use at his Sanitarium, as also the Spirometer, and all other modern pneumatometers and instruments serviceable either in the diagnosis or treatment of pulmonary diseases.

and such a sanitarium. For sad experience had taught me to expect a pretentious specialist or quack (they are brothers), with as pretentious and more dirty surroundings. Truth permits me to say gladly that I am convinced that for those either threatened with or in the early stages of consumption, and especially for such of these as live in the malarial regions of the South, their best hope of prolonged life and renewed health will be in availing themselves of Dr. Gleitsmann's Sanitarium.

While there, I had daily intercourse with a half-dozen consumptive inmates, and satisfied myself that their unanimous report of decided improvement was not exaggerated. One was a young and intelligent physician, whose favorable experience was such, that he was investigating the relative altitude of the various southern mountain villages in search for a location which might possess the double advantage, suitability both for his business and his disease. Another patient from the South Carolina low lands had experienced great relief from distressing bronchial irritation, and great amelioration from suffering, though so far advanced in consumption that no hope was entertained of his restoration to health. In a valley near to, and much lower than Asheville, old residents assured me that during their whole lives they had never heard of but two deaths by consumption, and that these two deaths were of a young brother and sister. Throughout this entire region the disease is rare. Forty miles southwest of Asheville is the mountain, Cæsar's Head, 4,000 feet above the sea, presenting with the Table Rock and other surroundings the grandest scenery I have ever witnessed out of Switzerland. On the summit of Cæsar's Head is a comfortable summer inn; and its amiable and hospitable host is the intelligent physician, Dr. Miles, who resides and practices in Pickens, South Carolina. The doctor assured me that he had long been wasting away with bronchial and pulmonary symptoms, and had for several preceding years made Cæsar's Head his summer home, on account of the great benefit to his disease. He is now as robust a specimen of physical vigor as the United States can produce. By him and others, I was assured that asthma was unknown at Cæsar's Head, and was always relieved when brought there. These are some of the special facts, which I

have desired to add to the general ones previously stated, in justification of my own favorable opinion of the benefits to be derived by consumptives and asthmatics from this mountain region.

Another strong recommendation to the impoverished people of this section is, that nowhere else in the South can economy be so readily consulted. Good accommodation (not the very best, but the best the country affords) is furnished at from $25 to $40 per month, and these amounts secure greater comfort than many of our summer resorts afford at double and treble these sums. I regret that I am forced to warn those habituated to well-cooked meats, that he who would enjoy them in this as in other mountain regions, will be forced to exercise his utmost skill and tact. For the natives do not deem meat properly cooked until it approximates dried raw-hide soaked in a greasy gravy, and their devotion to and abuse of the barbarous frying-pan is well calculated to dry up the digestive juices of any well-fed Christian. But, let it be understood that Dr. G.'s Sanitarium is a blooming oasis in this desert of ill-cooked meats, that Mrs. G. is a grand mistress of the culinary art of civilization, and yet that the comfortable rooms and appetizing table of the sanitarium are to be had at the habitual rates prevailing in Asheville, viz., at from $8 to $10 per week. Dr. G.'s charges for medical services are so extremely moderate, that I can not conceive that the very narrowest purse and conscience could invent just cause for dissatisfaction.

How are Asheville and the Sanitarium reached? By two main railroad routes, viz., by the "Piedmont Air Line Railway" on the east, which extends 547 miles from Atlanta, Ga., to Richmond, Va.; and by the E. Tenn., Va. and Ga. R. R., i. e., by so much of said road (130 miles) as extends from Knoxville to Bristol. On the former route there are three depots of consequence in this connection. First, travelers from the South should halt 158 miles beyond Atlanta at Greenville, S. C., where comfortable accommodation can be secured, as also good private conveyances, or daily stages over an excellent road, 60 miles to Asheville; at least one good halting place will be found en route, viz., at Hendersonville, 40 miles from Greenville and 20 miles to

Asheville. Second, the traveler from the South may substitute for this 60 miles of good staging, 221 miles by rail and 25 miles of staging, by continuing on the Piedmont Railroad from Greenville, S. C., to Charlotte, N. C. (107 miles), and by then taking a branch railroad via Statesville to Old Fort (about 114 miles), at which terminus he will find 25 miles staging to Asheville. Third, the traveler from the North should take the Piedmont Railroad from Richmond to Salisbury, N. C. (238 miles), and from thence via Statesville to Old Fort, 114 miles, from whence 25 miles staging to Asheville. So much for the eastern route by the Piedmont Railroad.

The traveler, whether from the South or North, if not debilitated or disabled by disease, will find the most attractive but laborious route to Asheville to be via Morristown, Tenn., a dirty place, with hotel accommodation of such a nature that I shall never forget the wretched sensation of despondency which overwhelmed me when my weary body first sought needed rest there; and my weary brain was terrified by the thought that this savage place forewarned of grosser barbarisms in the unknown country beyond it. This wretched village, 40 miles from Knoxville and 90 from Bristol, has fortunately a branch railroad which quickly takes the disgusted traveler 40 miles away to its terminus, Wolf Creek. From thence there are good daily stages (Sundays excepted) to Asheville, 46 miles distant; and for 37 of these 46 miles the stage road runs by the bank of the enchanting French Broad. This wagon road is not good, and is likely to prove too exhausting to invalids, and very tedious to all not aroused to enthusiasm by the wildest mountain and river scenery in the eastern United States. By this route, via Morristown and Wolf Creek, with its 46 miles of tedious staging to Asheville, the great advantage is gained of having en route three convenient stopping places. Nine miles beyond Wolf Creek the stages halt, generally for the night, at the famous Warm Springs, where an excellent hotel furnishes good accommodation, and where many rheumatics, dyspeptics, and neuralgics successfully resort for relief. Sixteen miles beyond the Warm Springs is the beautifully located mountain village, Marshall, where accommodation, though not of desirable quality, can be procured. Beyond Mar-

shall and within nine miles of Asheville, is Alexander's noted and extremely comfortable inn.

The reader should be informed that since the summer of 1875 work has been done on the various railroads verging towards Asheville, therefore he may find depots now nearer to it than those of Greenville, Old Fort, and Wolf Creek; and that the traveling expenses for one person to Asheville, by any route from such distant centres as New Orleans, St. Louis, and Boston, ought not to exceed $50.

Having introduced my reader to the only American Mountain Sanitarium—having stated my reasons for strongly recommending it—having instructed him what to expect as to expense, accommodation and medical treatment, and by what mode of travel to get there—I have no duty left except to express my acknowledgments for many of the facts cited to Bordier's articles (1875) on Climatotherapie, in Gubler's "Journal de Therapeutique;" to Lombard's "L'Immunité Phthisique" (1871); to Williams' "Lettsomian Lectures" (1876); to Gleittsmann's "Statistics of Mortality from Phthisis Pulmonalis" (1875); "Nature and Curability of Phthisis Pulmonalis" (1874); "Altitude and Climate in Phthisis Pulmonalis" (1875); to Dr. S. E. Solly's "Mineral Waters and Climate of Manitou" (1875; to the "American Medical Journal of Science, Oct., 1871, and Oct., 1875; to Grisolle's, Ziemssen's, and other well-known text books; to Parke's and Wilson's works on Hygiene; and finally to Maury's and other physical geographies.—*New Orleans Med. and Surg. Jour.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—*Cases of Diphtheria.* By Dr. CESARE CIATTAGLIA, of Rome. Medical notes translated by J. P. Steele, B. A., M. D., Edin.

I propose to publish some facts drawn from my experience in treating diphtheria; facts relating to the internal use, in large doses, of chlorate of potash, and to the local application of hydrate of chloral.

It is beside my purpose to dwell upon the genesis and nature of diphtheria, nor do I intend to explain the action of the two above-named drugs in that particular affection. I reserve myself for another paper on the nosogenic and therapeutic features of the whole subject.

The internal use of chlorate of potash in diphtheria is not new. Vogel recommended it so long ago as 1860, in half scruple or one-eighth of a scruple doses, dissolved in water, in the twenty-four hours, for children from one to five years of age.

The chloral, as far as I know, has not been prescribed before Ferrini, who, during last year's diphtheria epidemic in Tunis, observed its efficacy when smeared over the false membranes in a solution of from two to three grammes of the chloral hydrate to from fifteen to twenty grammes of glycerine.

From 1870 I had employed chlorate of potash combined with the local application of phenicated alcohol or of a weak solution of nitrate of silver, and I was generally satisfied with the success of such treatment. My friends and colleagues, Drs. Roseo, Grana, and De Rossi, confirmed the efficacy of the chlorate of potash, particularly in the diphtheria epidemic of 1872 in Carpineto Romano, Montellanico, and Anagni (province of Rome), when combined with the perchlorate of iron or the nitrate of silver applied locally. For these latter I have lately substituted hydrate of chloral, and it is the advantages it has yielded, and the desire to have these confirmed by other practitioners, that induce me to publish my experience.

The dose of hydrate is four grammes, dissolved in twenty grammes of glycerine, and applied with a camel's hair brush, three or four times a day, to the false membranes. The chlorate of potash I have exhibited in doses of from ten to fifteen grammes a day dissolved in 140 of water, to children of from three to six years, and of thirty grammes to adults. With these medicines I have always combined a tonic and restorative diet.

One fact worthy the observation of practitioners is this: The moment the chloral and glycerine were applied, the false membranes ceased to spread, while the characteristic fetor from the mouth entirely disappeared on the first or at latest the second

day of application. I may add that the chloral, as dissolved in glycerine, besides remaining longer in contact with the diphtheritic surfaces, produces less of the burning sensation than when dissolved in water.

CASE I.—A. N., a little girl aged seven, of delicate constitution, complained, on the 2d of February last, of slight sore throat. On looking at the fauces, I found two diphtheritic membranes on both tonsils of the size of two six-penny pieces. There was no fever, no constitutional disturbance, not even engorgement of the cervical glands. I confined my prescriptions to simple gargles of phenicated water. Next day the membranes were more diffused, the fauces intensely red and swollen, and the engorgement of the glands increased. Temperature 39° C.; pulse 110; urine normal. I ordered at once fifteen grammes of the chlorate of potash, dissolved in 140 of water, to be given one tablespoonful every two hours; and I smeared thrice a day the membranes with the chloral and glycerine. On February 4th, the temperature was 40° C; pulse 125. The membranes had ceased to spread. The urine presented traces of albumen. I continued the same treatment. In the afternoon I found the fever slightly abated; the fauces perceptibly less swollen and less red; the engorgement of the glands had also diminished, and the child was rather relieved. On the 5th, the fever had gone; the membranes had almost entirely disappeared from the affected surfaces. I reduced the exhibition of the solution of chlorate of potash to one tablespoonful every three hours, and the application of the chloral and glycerine to only twice a day. On the 6th, the improvement had continued. Engorgement of the glands scarcely visible, the urine normal, and the child more calm. On the 8th, the membrane on the right tonsil remained, but was less in extent. On the 10th the cure was complete. All next day I continued the chlorate of potash (one tablespoonful every four hours), and I ceased to apply the chloral and glycerine.

CASE II.—On the afternoon of the 20th of March of this year I was called to Madame S. G., aged thirty, of a lymphatic temperament and sound constitution. By her account she had that day, while in her usual health, felt a burning, almost in-

stantaneous, pain in the left side of the throat, for which she could give no reason. She tried to think nothing of it, till an aggravation of the symptoms, with the supervention of fever and rigors, made her send for me. When I saw her I found febrile heat, 39°, a guttural voice, engorgement of the tonsils and submaxillary glands, urine normal. The throat, on examination, showed a membrane on the left tonsil the size of a half penny. I ordered twenty grammes of the chlorate of potash in 140 of water (one tablespoonful every hour), and gargles of phenicated water. On the 21st of March, the fever had risen; the temperature was 40° C, the pulse 120; there was agitation and dyspnœa; the membrane had covered all the posterior surface of the mouth; the breath was foul; some points of the membrane had become gangrenous. I smeared the latter with chloral (four grammes) and glycerine (twenty grammes), and repeated it thrice a day, with the regular solution of chlorate of potash, and also gargles of the same. On the 22d the fever had rather subsided; the thermometer marked 38°; the pulse was 110; the urine retained its normal character; the membranes presented no change; the feeling of oppression had diminished. With the treatment I combined a tonic and restorative diet. On the 23d I found Madame S. quite apyretic; the membranes in the morning were still adherent, but in the afternoon they were almost completely detached; no fetid breath; the voice more clear; the general condition of the patient much improved. On the 24th there was nothing noteworthy, and I applied the chloral and glycerine only twice. On the 26th there was a very perceptible improvement, and on the 28th I suspended the application of the chloral, the fauces no longer presenting any trace of false membranes. I continued the chlorate of potash every three hours till on the 30th Mad. S. was quite cured.

Case III.—On the 15th of April I was called to see a little girl of five years and feeble constitution. The evening before she had a fever attack, with slight frontal headache. When I saw her the fever was still present, but slight. On examining the throat I saw on the left tonsil a membrane about the size of a half penny. The engorgement of the glands was not very per-

ceptible; the urine was normal. I prescribed regular treatment, and next day the membrane had sunk by one-half, and the engorgement was so reduced as not to be recognizable. The fever, however, was present. On the 18th the fever had quite gone, and by the 20th the little patient was quite well.

CASE IV.—On the morning of the 17th of April I was called to Madame P. E., aged thirty, and of delicate frame. Since the 16th she had complained of difficulty in deglutition and profuse salivation. The fauces presented diphtheritic membranes on both tonsils; the engorgement of the submaxillary glands was remarkable. The temperature was 39.5°; the pulse was 120; the urine normal. I prescribed twenty grammes of chlorate of potash in 140 of water, one tablespoonful every two hours, and I smeared the membranes with chloral and glycerine three times a day. Shortly after this local application the pain in the throat diminished and deglutition became more easy. On the 18th there was a slight improvement; the fever almost as high as the day before; the urine still normal. I continued the same treatment. On the 19th the fever had gone; the patient felt somewhat better; the engorgement of the glands was perceptibly diminished; the diphtheritic exudation had in great part come away. On the 20th the patient said she had passed a slightly worse night, but I found no aggravation of the symptoms. On the 22d the improvement was very marked. Treatment same as before. On the 23d the fauces were almost free from false membrane. I continued the treatment up to the 26th, on which day the cure was complete.

CASE V.—A. C., a girl eight years of age, of weak constitution, fell ill of diphtheria on the 1st of May. All the symptoms were grave. The false membrane covered all the left side of the fauces and the velum pendulum palati; perceptible engorgement of the submaxillary glands; dyspnœa; epistaxis and semi-sanguinolent flux from the nostrils of a most offensive fetor; breath very foul; pulse 125; temperature 40°; urine presented a marked amount of albumen. I immediately brought the patient under the chlorate of potash and smeared the diphtheritic surfaces with the chloral and glycerine. On the 2d of May, no change but a slight decrease of fever. On the 4th a

marked improvement; apyrexia, glands less swollen, respiration easier, epistaxis reduced to one attack, fetor quite gone. On the 5th membranes had in part come away, albumen in urine diminished; the little patient was much relieved. On the 8th the fauces were completely rid of the membranes; no trace of albumen in the urine; pulse, respiration, temperature normal; sometimes a little vomiting had occurred; there was aphonia, and I ordered Ruspini's syrup. On the 10th I left the patient quite well except the local weakness, which, however, I have since ascertained to have disappeared.

Case VI.—On the 20th of April a boy of four and of strong constitution was attacked with diphtheria. On the left anterior pilaster of the velum pendulum palati I found a diptheritic membrane of the size of two six-penny pieces. Fever very mild, engorgement of glands scarcely perceptible, urine normal. The chlorate of potash and the chloral hydrate with glycerine were prescribed for five days, and at the end the cure was perfect.

Case. VII.—A case identical with the above was that of a girl six years of age, but of lymphatic temperament and weak constitution. I was called to see her on the 24th of April, when a slight fever had declared itself. She did not complain of pain or inconvenience of the throat; there was engorgement of the glands. On the left anterior pilaster of the velum pendulum palati, and extending over the velum itself, I found a diphtheritic membrane the size of a half-penny. The urine was normal. I adopted the same treatment for this as for the other cases; and on the 25th found the febrile heat 39° C., the pulse 120, the engorgement of the glands beginning to appear, but the membrane shrinking. In the evening the improvement was general, the patient being relieved, and the deglutition—difficult in the morning—returned to the normal condition. On the 30th the little patient, who had been coming steadily round in the interval, was quite well.

Case VIII.—My distinguished friend, Dr. Alberto Rosa, invited me on the 10th of April to see one Cesare S., thirty years of age, and of good constitution, who, without apparent cause, had been attacked with diphtheria on the 31st of March. Dr. Rosa mentioned that on the first visit—on the 30th of

March—there was slight fever and a marked redness of the fauces, accompanied by a scarcely perceptible engorgement of the glands, and by pain, with difficulty of deglutition. These symptoms betokened diphtheria, but for that evening Dr. Rosa confined himself to prescribing astringent gargles. Next morning diphtheria declared itself in a membrane covering the right tonsil to the size of a half-penny, and in an aggravation of all the symptoms which accompany the disease. The fever had risen to 39°, the glandular engorgement particularly on the right side of the neck, being especially marked. He ordered sulphate of quinine internally and cauterized the membrane with nitrate of silver. A tonic and restorative diet made up the treatment for the day. By the eighth day the general condition was worse, and when I saw him the patient was reduced to a very low condition. The fever heat was 40° C.; the pulse 125. The throat revealed a membrane of the size of a penny piece, and extending up the posterior aspect of the velum pendulum palati; the glandular engorgement was marked; from the nares came an offensive flux; there was aphonia; and the albumen in the urine was moderate in quantity. I immediately prescribed the chlorate of potash, and the hydrate of chloral with glycerine. On the 11th of April the patient complained of nausea; then he had vomiting and twice fainted. I persevered with my prescriptions. On the 12th the improvement was very perceptible; the fever had declined, the throat was less painful, deglutition more easy. The membrane was still adherent, but had not extended. The urine contained less albumen. On the 14th the progress towards recovery was obvious; no trace of albumen in the urine; no shred of membrane visible. There was still, however, much prostration and anarexia, with restless nights and persistent insomnia. Dr. Rosa continued for two days more to prescribe the chlorate alone, with the tonic and restorative diet. Several days thereafter I found the patient quite well.—*Lancet.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

International Medical Congress.

Morbus Coxarius.—The discussion on Dr. Sayre's paper on "Morbus Coxarius and its Treatment" was then resumed, and after much discussion, the following conclusions were adopted by the Section, and the paper referred to the Publication Committee:

1. Morbus coxarius is a disease most frequently met with in early childhood or the age of reckless indifference.

2. That it is almost always of traumatic origin, and not necessarily connected with a vitiated constitution.

3. That rest and freedom from pressure of the parts involved, while at the same time the rest of the body is allowed free exercise in the open air, and a nutritious diet, is the best treatment that has yet been devised for this disease.

4. That if this plan of treatment is adopted in the early stages of this disease, the majority of cases will recover with good, if not quite perfect, motion, and without deformity.

5. That in the advanced second stage of the disease, when absorption of the effused fluid can not be produced, then it is better to puncture or aspirate the joint, and remove its contents, than to leave it to rupture by ulceration.

6. That in the third stage of the disease, when the treatment recommended in this paper has been properly applied, without satisfactory improvement, but progressive caries continues, then exsection of the diseased bone is not only justified, but in many cases absolutely necessary.

7. That the operation of exsection of the hip-joint is easily performed, and in itself attended with little or no danger.

8. That after exsection of the hip-joint in cases of progressive caries, the recovery is much more rapid and certain, and infinitely more perfect as to form, motion, and the usefulness of the joint and limb, than when left to the slow process of nature.

With regard to the sixth conclusion, in cases in which suppuration has taken place while there is as yet no external open-

ing, in which Professor Sayre advises exsection, Professor Lister remarked that in one case of this character he had opened the joint antiseptically, and treated the joint by this method, and that the leg was now of the same length as the other.

The conclusions of Professor Sayre's paper on hip-disease, which had been sent to the Publication Committee on the previous day, were again presented by them to the Section for further consideration, as they were aware that there was a large minority opposed to some of them, more particularly to the second.

Dr. Brodie, of Detroit, read a resolution that the paper of Dr. Sayre and his conclusions be recommended to the Congress for publication, with the exception of the second conclusion, with which the Section could not coïncide. The motion was seconded, and, after some discussion, and the suggestion that the whole matter come up for final action in the Congress, carried.

The report of Dr. Hodgen on antiseptic surgery was, on motion of Dr. Sayre, referred to the Publication Committee.

Mr. Adams, of London, then read a paper on "Subcutaneous Division of the Neck of the Thigh-bone." He stated that the operation was first done by Barton, in 1826, in this city, by Sayre, in 1869, and by himself in the Great Northern Hospital of London. The operation is done by him by passing a narrow knife down to the neck of the femur, excluding air by pressure, and then introducing a narrow saw, with a cutting edge of an inch or a little more, into the track of the knife and dividing the bone. Some of the tendons about the joint may have to be divided before the limb can be adjusted to the desired position. He has records of twenty-three operations and their results, and among them there was but one death, and that occurred in a case which he thought an unfavorable one for operation. The operation has been done by Maunder with a chisel, but Mr. Adams gives preference to the saw, as it can be manipulated with greater certainty than the former instrument. From the results of his own operations and those reported by others, he thinks that we may conclude that:

Bones may be divided subcutaneously, like tendons.

Leg-bones can be divided at any part of their length with but little risk.

In a large number of cases, union is by first intention.

There is usually but little pus, and but slight amount of pain.

In a few cases there may be deep-seated suppuration, and one death has been reported from pyæmia.

It usually corrects deformity, but anchylosis generally occurs. In some few cases motion has lasted for some time, and in one for three years.

Dr. Post stated that the operation had been twice done in New York before it was performed by Professor Sayre, once by J. Kearney Piper and once by himself. A claim for priority was then made by Dr. McGugin, of Iowa, who stated that twenty years ago he had divided a femur subcutaneously by the use of a chain-saw, which he passed down to and around the bone. The patient, a boy, made a perfect recovery, served in the army in the late war as a private, and was killed at Vicksburg.

Dr. Servais, of Belgium, called attention to the diverse causes of anchylosis of the hip, and to the care needed in the formation of a diagnosis. He stated that in Belgium cases of this kind were extremely frequent, and also that he had frequently operated for the relief of the deformity by breaking the thigh-bone at its marked point, just below the trochanter. He claimed for this mode of procedure that all risk of causing a compound fracture was avoided. Extension in these cases had been begun by Mr. Adams on the fourth day, and kept up for three or four weeks, and motion made under chloroform every third or fourth day. In the future, he thinks, he will begin extension at once, and keep it up continuously by the application of heavy weights.

Dr. Sayre has done the operation with a chain-saw, and applied extension at once, and obtained good motion. He advises Mr. Adams' operation if anchylosis can be avoided.

Dr. Moore, of Rochester, referred to experiments of Dr. Bly, of the same place, with regard to the extensibility of living muscle, by which he proved that by strong traction muscular fibre would extend to a certain amount. This quality should be

borne in mind in the treatment of cases after this operation, as it is perfectly possible to draw out the leg to too great a length.

Prof. Lister confirmed this statement, and said that in Edinburgh anchylosis with unfavorable position was quite rare, and this he attributed to the teachings of Mr. Syme.

Dr. Austin Flint, Jr., Professor of Physiology in the Bellevue Hospital Medical College, New York, read a paper on "The Excretory Function of the Liver." Dr. Flint had made no new observations upon the subject, but wanted to bring the matter before the Congress for confirmation, as he did not think it had received the attention that the importance of the subject demanded. He related his well-known experiments which resulted in the discovery of the new principle which he called *stercorine*. This presents itself as a non-saponifiable, gummy substance, crystallizing in needles, split at the points, like Robin's seroline.

Stercorine is an excrementitious substance found in the fæces, and resulting from the transformation of the cholesterine of the bile during digestion.

He reviewed the literature of the subject since the publication of his paper. It seemed to consist mainly of investigations into the relative toxic properties of the elements of bile. He thought they had determined cholesterine to be the noxious matter retained in the blood in cases of toxæmia from hepatic disorders.

In the bile there are two important elements, representing two different functions. First, the salts of soda. They belong to the function of nutrition. They are manufactured in the the liver, do not accumulate in the blood, and constitute a secretion. Second, cholesterine, a substance resulting from the retrograde metamorphosis of some of the tissues, particularly the nervous, and carried in the blood to the liver, where it is excreted with the bile. If this excretory function is interfered with, we have toxæmia.

If digestion is disturbed, cholesterine is not converted into stercorine, and is found in the fæces. Destruction of the substance of the liver, when sufficiently extensive, causes cholesteræmia, with or without jaundice.

The Section unanimously resolved to accept the conclusions

advanced in the paper, and recommended it to the Congress for publication in the Transactions.

Lafayette County (Miss.) Medical Society.

The Society convened at Oxford, Miss., July 3, 1876, Dr. Thomas D. Isom in the chair.

Dr. C. A. Pegues read an essay on "Epidemics," which gave rise to some discussion, and was requested by the Society to be forwarded to the "Richmond and Louisville Medical Journal" for publication.

Dr. A. E. Hardin having been elected delegate to the State Medical Association, made his report, which was received, and the thanks of the Society tendered for his earnest efforts to secure the appointment, through the Legislature, of a State Board of Health.

The Association adjourned to meet the first Monday in October, 1876. CHAS. A. PEGUES, M. D., Cor. Sec.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, October, 1876.

Professor E. S. Gaillard:

Dear Sir,—Dr. Sayre still continues to treat all his cases of both lateral curvature and Pott's disease of the spine by means of the plaster of Paris jacket, and has good reason to be more than ever pleased with the results thus obtained. He is constantly adding new "wrinkles" to render more perfect this method of treatment, which, in the language of a resolution introduced by the venerable Professor Alfred C. Post at the late meeting of the National Medical Association, "has inaugurated a new era in the history of American surgery." One of these is the use of an air-bed, upon which the patients are laid immediately after the application of the dressing, for the plaster to "cook" or set. Before this was adopted, the pressure upon the

projecting seat of disease occasioned by the comparatively hard surface of an ordinary sofa, which was then employed for the purpose, sometimes gave rise to pain and inconvenience, the plaster hardening while thus being forced too tightly upon it. Another wrinkle that the Doctor has adopted is to place little compresses over the crests of the ilia while the bandage is being put on, and then remove them after it is set, as it adds greatly to the comfort of the patient to have the dressing fit loosely over the unyielding surface of the bones. He sometimes puts a compress over the abdomen also, so as to allow room for the distension of the stomach with food; and it is his intention to have a little rubber-bag constructed which can be fitted under the plaster-jacket, and capable of being inflated to various degrees, according as the stomach contains more or less food.

Dr. Sayre has now discarded the use of the tin rods which he formerly inserted while the dressing was being put on, as it was found that they did not contribute to its strength, and sometimes occasioned considerable inconvenience. When the seat of the disease is very high up in the spinal column, he supports the head by means of a steel apparatus, (allowing the patient to move it freely in all directions), which rests upon two metallic shoulder pieces firmly embedded, on either side, in the plaster dressing, while the latter is in process of being applied.

The New York correspondent of one of the papers published in the State thus gossips about some of the dentists of Manhattan. We can not vouch for his figures. "Among the great dentists of this city, living and dead, are such names as Drs. W. H. Atkinson, E. J. Downing, Parmly, W. H. Dwinnell, Dunning, and others. Dr. Downing has been able to attain an income which report has fixed at $30,000 a year. Atkinson has not done so well, but his business has been worth $15,000 a year. Dr. Dwinnell has frequently earned $20,000 a year, which ought to satisfy a reasonable man. Dr. Wadsworth, of whom I have spoken, charged $3,500 for filling seven teeth last summer, and I have never heard that the patient considered it more than a reasonable bill. I can also refer to a lady living in Utica who paid $800 for a similar service. Dr. Dwinnell has probably received higher fees than any other practitioner, and

his opulent patients, indeed, are ready to pay him almost any price that he may choose to charge. His terms for filling a tooth are from $20 to $150, and he has been paid $2,000 for cleaning and filling a set. He has also been paid $5,000 for performing the same service for two persons. These prices are really enormous, and yet there seem to be many people in a large city to whom they are but trifles."

As a general rule, it is a good plan to make quite sure, if possible, that your patient is really dead before you publicly pronounce him so. The other day, over in Jersey City, a physician made the mistake of not carrying this out. It seems that a young man of nineteen fell down stairs early in the morning, and his mother being awakened by the noise of the fall, found him lying apparently lifeless at the foot of the stairway. A physician having been summoned, gave it as his opinion that life was entirely extinct, and went his way; but the mother was loathe to believe that he was dead, and tried various expedients, on her own responsibility, in order to excite some sign of animation. While endeavoring to force a cordial between his lips, what was her joy to see her son slowly open his eyes, and presently speak to her. In a short time he was apparently entirely well again; and, as far as could be made out by the medical men who examined him, he seemed really to have received no injury whatever from his fall, other than the severe shock which had at first prostrated him.

In view of the very extensive prevalence of the plague in the East at the present time, a few extracts from some reminiscences of the plague at Smyrna in 1834 by a missionary's son, recently published in the "New York Evangelist," may prove of interest. "In one night the city's whole aspect was changed. The Christian and Jewish population had everywhere begun that process of rigid family quarantine which experience taught to be the only safeguard against the terrible disease. At every door provision was made for disinfecting whatever might necessarily be brought into the house. A box stood there, in which letters were smoked with straw and brimstone, before being touched; and there was also a tub of water, in which meat and vegetables were deposited by the seller, and from which the

family took them. Bread was brought hot by the baker and not touched till cold, and a small dish of vinegar was kept, into which the money was dropped. Visitors were received on the bare floors and wooden seats, and on no account was handshaking or near approach indulged in. If it became necessary to invite a visitor to take a meal, no table-cloth or napkin was laid, and he would ordinarily refrain from touching bread. Dishes brought hot from the kitchen, and served out with fork and spoon, were not esteemed capable of conveying infection. During this time a pall seemed suspended over the city, and the chief subject of conversation was the number of deaths day by day. After the disease had spread well among the Turks, two hundred to three hundred deaths sometimes occurred daily. Persons attacked by the plague were instantly abandoned by all their relatives and friends, and left to the care of the attendants at the plague hospital, where they were at once taken. Little was known, but fearful stories were told about these attendants, and the plague hospital was dreaded as a very hell on earth. No physicians prescribed for plague patients; they acknowledged that they knew nothing about it. The disease varied in its course with different patients, sometimes raging a week, and even ten days, before death ensued. One startling case occurred near my father's house. An Austrian ship-chandler across the street occupied a room over his store. On Sunday morning we were told he had the plague. Looking over, we saw friends standing at the door of his room, to whom he was dictating his will. When it was finished and the witnesses had signed it, it was passed to him at the end of a long stick for his signature, and then taken back, fumigated, and laid away. It was now time for church, and when we returned home, we learned that attendants from the plague hospital had come for our neighbor, and about noon, of his own choice, he had walked to the hospital, they going before and warning people out of the way. At 2 o'clock word came that he was dead and *already* buried."

A fatal case of undoubted yellow fever has occurred in Brooklyn, and the physician made out the cause of death on the certificate as follows: First (primary), jaundice; second (imme-

diate), malignant bilious fever. He stated that his reason for doing this was his fear of suddenly and needlessly alarming the neighborhood; but he will be summoned to appear before the Board of Health in consequence.

There is a woman one hundred and three years old in the almshouse on Blackwell's Island who has a heavy gray beard, and is shaved occasionally. In Charity Hospital, on the Island, there are now forty-five trained nurses.

Faithfully, yours, STAR.

CHEMISTRY AND PHARMACY.

"Diruit, ædificat, mutat."—HOR.

American Pharmaceutical Association—Phosphorus as a Remedial Agent.—The paper of the writer, Edward R. Squibb, was opened with very full accounts of its reputed therapeutic properties as stated by various authors of Europe as well as of this country. Both sides of the question were fully drawn from, and the comments of the writer were mainly as to the character of the formula for its administration. He does not advocate, but rather rejects the idea of giving it in the form of pills or in volatile liquids, and maintains that a fixed solvent, such as some of the oils, is the most appropriate. His own preference was for cod-liver oil as a vehicle, and his careful experiments are detailed, giving full particulars of the mode of treatment by which it is freed from air during the process. The preparation does not keep well in quantity, nor should it be kept long. The process can only be explained by too much detail for these columns at present. The solution exhibited was stated to contain one per cent. of phosphorus. Pills may be made from this oil, and some were exhibited, and their formula was described. In these pills there can be no possible separation of phosphorus in solid form.

Notes on Pancreatin, Diastase and Ptyalin.—The assertion of Emil Scheffer, at Boston last year, that Pancreatin in presence

of acidulated pepsin is destroyed, is confirmed by subsequent experiments. As diastase is found in malt in a neutral state, and both pancreatin and ptyalin are secreted in a neutral or alkaline state, it is to be pre-supposed that these are the natural conditions under which they act.

Hydrochloric acid impedes the action of diastase upon starch, and destroys it. The experiments detailed by the writer with this acid, prove conclusively that the presence of a small quantity of the acid so far destroys diastase, that starch is not changed into sugar. Pepsin converts diastase into peptone, and in an acidulated solution of pepsin, diastase can not convert starch into sugar. Freshly secreted saliva alters starch paste into sugar, but when a minute quantity of acidulated pepsin is added no such change occurs. Other concurring experiments led the writer to a firm conviction that, in the presence of acidulated pepsin, all albuminoids are converted into peptone.

Ergotin.—Charles L. Mitchell stated some of the physiological and chemical reasons which led him to deviate from some of the published formulas in making an active, solid extract to represent the medicinal virtues of this drug. The product of the following formula yields a result in every way satisfactory:

Ergot, in fine powder, 8 troy ounces.

Acetic acid, 2 fluid drachms.

Alcohol, 4 fluid ounces.

Moisten the ergot with a mixture of acid and eight fluid ounces of water; let it stand 24 hours; pack in percolator, and exhaust with water; evaporate to four fluid ounces, add the alcohol, let it stand several hours, filter and evaporate to an extract. Result about 480 grains; one grain is equal to eight grains of ergot.

Bromo-hydrate of Quinia.—Dr. George B. Orr presented to the Cincinnati Academy of Medicine a specimen of this article, and stated that for two weeks he had been testing it in the same doses as he had been accustomed to use with the sulphate. He considered the bromo-hydrate twenty times as soluble as the sulphate. Its ready solubility causes it to be quickly

absorbed, and its constitutional effects to be more rapidly produced. Hence, in the treatment of intermittent fever, it need not be administered so long before the expected chill.—*Clinic.*

Michigan Opium.—The writer, Joseph P. Remington, having recently received some of this article, took the trouble to examine it. Its physical properties pointed to a product like extract of lettuce, and on fully examining it, no morphia whatever was found.

Powder for Producing Ozone.—"In order to produce artificial ozone, Mr. Lender makes use of equal parts of peroxide of manganese, permanganate of potassium and oxalic acid. When this mixture is placed in contact with water, ozone is quickly generated. For a room of medium size, two teaspoonfuls of this powder, placed in a dish and occasionally diluted with water, would be sufficient. The ozone develops itself; it disinfects the surrounding air without producing cough."

The attention of the writer was called to the above article as it appeared in the "Philadelphia Medical and Surgical Journal," under date of May 20th, 1876. For the purpose intended, it is certainly one of the best of the published formulas; but, on account of the danger attending its manipulation, it should be used with extreme caution. A prescription with these proportions was taken to an apothecary, who inadvertently used a mortar in mixing it, with the result of an immediate explosion; which would have been attended with disastrous consequences except for the smallness of the quantity employed.

In mixing these ingredients, trituration should not be used at all, but they should be cautiously mixed with a spatula in small quantities; and even then, if they should have been reduced to a fine powder, they can not be mixed without danger, as the mixture is liable to explode at the moment of contact.

Apothecaries who are not deficient in knowledge are sometimes deficient in caution, and articles published in reliable journals are copied and used without hesitation, and the compounder or dispenser is brought into unlooked for and unexpected difficulties.

The above article is written solely with a view of placing druggists and physicians on their guard in using or dispensing a dangerous compound.—*John L. Davis in Jour. of Pharmacy.*

Picric Acid for Sore Nipples.—In an article published in the "Courier Médical," Dr. Charrier recommends the use of picric acid in solution as a cure for sore nipples. The application has the effect of rapidly removing the pain, and checking the morbid secretions. The acid is used in the following manner: It is important to employ the chemically pure product, perfectly free from soda, and two solutions of different strength are prepared. The first or concentrated solution is made of three drachms of picric acid dissolved in two pints of water; and the second or weak solution only contains sixteen grains of acid to the same quantity of water.

To apply the lotions, the nipple is first well cleansed and washed with a fine sponge and lukewarm water; then a very fine camel's hair pencil, dipped into the concentrated solution, is gently passed over the chapped and inflamed parts. This is done once a day, in the morning; and each time after the child has been suckled, the nipple is immersed during three or four minutes in a small glass filled with the weak solution.

After from twelve to twenty-four hours, the sharp pains experienced when the child is suckled begin to disappear, and all the red and inflamed parts assume again their natural color. The picric acid solution extinguishes, as it were, the inflammation on the spot, prevents the lymphangitis from extending further, and therefore averts phlegmons and abscesses of the mammæ. Another advantage of the acid is that it tans the thin epidermis of the breast, rendering it thereby less liable to alterations.—*Druggists' Circular.*

A Diamond Saw.—Diamonds are likely to become as useful as they are ornamental. The diamond drill is the only drill that can bore its way through certain rocks whose hardness soon dulls the best steel drills. And now a diamond saw has been invented, which promises to do with stone what the finest steel does with wood. It consists of a thin metal disk, the

teeth of which are nothing more than minute black diamonds, embedded in the metallic edge of the sheet. When revolving at a high rate of speed, this disk cuts into the sides of a stone slab as though it were a piece of timber; and not only can straight cuttings be made, but by an ingenious mechanical device, bevels and rounded edges are cut. As a labor-saving machine, the inventor judges that one of them will do the work of fourteen stone cutters.

A New Adhesive Plaster.—A mixture of twenty parts of mucilage and one part of glycerine constitutes an excellent shining and supple plaster, far cheaper than the resin and diachylon, and lasting more than a year without deterioration. Three or four layers of the mixture require to be spread over each other on the linen or other stuff, allowing sufficient intervals for the successive layers to dry.—*Journ. de Med. de Bruxelles.*

Soap Root.—A large commerce is carried on from California in a fibrous substance known as soap root. It is obtained from a lily-like plant, a species of Phalangium (Chlorogatum pomeridianum, Kunth.), which is met with about the mountains, and attains a height of eight feet. The heavy bulb is covered with many coatings, consisting of fibres, which are used for cushions, mattresses, etc. Large contracts are entered into for the supply of this material on a very extensive scale. The inner part of the bulb serves as a substitute for soap, and it might be tried whether it can be utilized for technological purposes like the root of saponaria.

A Panic among Sponge Divers.—Advices from Beyrout state that the last crop of Turkey sponge was very deficient, and prices of ordinary and common sponges have greatly risen in consequence. The deficiency is attributed to a panic among the divers, caused by the appearance in the neighborhood of Batroun, Mount Lebanon—the chief sponge fishing locality—of a sea monster, alleged to have been equal in size to a small boat. Its actual depredations among the divers appear at the present time to have been limited to one man, whom he is said to have swallowed whole.

Cleaning Goods by Naphtha.—Naphtha is being used as a cleansing agent for furniture, carpets, clothing, etc., at an establishment recently opened in this city. The process consists simply in placing the article to be cleaned in a bath of the hydrocarbon, and there leaving it for a couple of hours. Huge vats are used, capable of holding several barrels of naphtha at a time; and in these, sets of furniture or carpets are secured so as to be entirely submerged in the liquid. No preparation of the goods is necessary, and the naphtha seems to exercise no deleterious effect upon varnish or gilding, upon glued joints, or upon the finest silk or satin fabrics. Dirt and grease are entirely eradicated, the latter sinking to the bottom of the vats, from which it is from time to time removed in the shape of a thick yellowish mass. Moths are of course totally destroyed.

Several fine sets of furniture were shown us, which had been treated by the naphtha process. They appeared like new so far as the fabrics were concerned, and there was no discernible smell of the fluid. The process is patented. The principal item of expense is the evaporation of the naphtha; but this being allowed for, the cost of cleaning is somewhat less than that incurred in the ordinary method followed by the clothes-scouring establishments. It may be added that naphtha does not act upon linen or cotton, and is practically available only upon animal fibres.—*Scientific American.*

To Prevent Damp from North Walls.—North walls are frequently damp from the absence of the drying effect of the sun; this defect may, however, be remedied by allowing ivy to grow over them. It acts both by preventing the access of rain, and by the rootlets absorbing moisture from the wall. In very exposed situations the rain is frequently driven with such violence against the walls, as to penetrate through them, although the brickwork is of considerable thickness. This evil may be obviated by dissolving three-quarters of a pound of mottled soap in one gallon of boiling water, and spreading the hot solution steadily with a large flat brush, over the outer surface of the brickwork, taking care that it does not lather. This is to be allowed to dry for twenty-four hours, when a solution formed

of a quarter of a pound of alum dissolved in two gallons of water, is to be applied in a similar manner over the coating of soap. The soap and alum mutually decompose each other, and form *an insoluable varnish* which the rain is unable to penetrate. The operation should be performed in dry settled weather.—*Mather's Circular.*

The Olive Tree.—It is safe to say that an olive tree from 7 to 10 years old will produce 50 gallons of oil annually, which, at 75 cents per gallon, the average price paid for pickles, and 50 trees to the acre, would be 1165 dollars for each acre cultivated. There is a wide field in California for the prosecution of this industry. The trees will grow anywhere, with little care, between Siskiyou and San Diego. The olive grows from the slip, and commences bearing in two or three years. In Italy, the production of olive oil is about 33,000,000 gallons annually; in France, 7,000,000; and in ten years California might send to market oil in amount equal to both the countries named.—*Santa Cruz Sentinel.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

The Medical and Surgical History of the War of the Rebellion. Part II. Volume II. Surgical History. Prepared under the Direction of JOSEPH K. BARNES, Surgeon-General United States Army. By GEORGE A. OTIS, Assistant Surgeon U. S. A. Washington: Government Printing Office. 1876.

The second volume is one-fifth larger than the first. In value it could not surpass the first, but to say that it equals the first volume is to give it the highest praise. In a work of such magnitude, it is not possible that some errors have not been incorporated; for where can statistics be found without these? But if it is ever possible to have accuracy when the testimony of a large number of people is required in order to gain it, then

accuracy can be found in this great work. If care, and labor, and painstaking research can result in correct records, this book should be found in an eminent degree reliable. The work is divided into four large chapters, which would seem at first sight to be a very inconvenient arrangement, but each subject is wisely distributed into sections, and the sections are carefully arranged, so that reference to any particular point is not difficult to make.

The illustrations are, for the most part, new, and are of extreme value. Those which are not new are still not the much-used, ever-repeated wood-cuts which we are in the habit of meeting in most of the medical works of the day; but they are illustrations chosen on account of their value, and from works not to be found usually in the ordinary medical library. There are seven hundred and forty-seven excellent wood-cuts, and thirty-five beautifully executed chromo-lithographs. Many of these are very superior.

The first chapter of this work is Chapter VI., in the regular series. It treats of Injuries of the Abdomen, and is divided into three sections. Injuries of the pelvis are not touched upon in this chapter, because the vast number of facts furnished by the records of the war require too large an amount of space. Dr. Otis states that he of course recognizes the fact that the abdomen and pelvis are contiguous and constitute in reality but one cavity, and that he only divides the subject on account of its magnitude.

He considers in Chapter VIII. flesh wounds of the back. Although this chapter is very short, it gives the result of twelve thousand six hundred and eighty-one gun-shot flesh wounds of the back. The best plate probably in the whole work is to be found here, giving an exact representation of a laceration of the buttocks by a shell fragment. The case is one for skin-grafting, and that practice is unreservedly recommended.

Chapter IX. is devoted to wounds and injuries of the upper extremities. It occupies one-half of the immense work, and still does not attempt to handle the whole subject. It considers only the facts regarding sword and bayonet and shot wounds. Dr. Otis was obliged to defer for the next volume (and the last)

all consideration of the facts communicated in reference to bruises, sprains, burns, scalds, frost-bites, luxations, and fractures from other causes than shot.

This last half of the work is as valuable as the first, and is worthy of close study. A review of any of it is clearly impracticable; for the review itself would be a volume. It is only intended in this brief notice to give honor where honor is due, and acknowledge with pleasure and gratification the great value of the Medical and Surgical History of the War.

Yellow Fever and Malarial Diseases, Embracing a History of the Epidemics of Yellow Fever in Texas; New Views on its Diagnosis, Treatment, Propagation and Control. Descriptions of Dengue, Malarial Fevers, Jaundice, the Spleen and its Diseases, and Diarrhœa Hœmorrhagica; with Practical Remarks on their Successful Treatment, etc. By GREENSVILLE DOWELL, M. D., Professor of Surgery in Texas Medical College, etc. Philadelphia: Medical Publication Office. 1876.

This is undoubtedly one of the most curious and amusing volumes now before the Public. The views of the author are so vague and indefinite that, as he admits, there was a motion desired at a meeting in which he participated "to ascertain on which side the gentleman was." His reply was as quaint and naive as was the occurrence; "on the side of truth"; and as he advocates both sides of all points in controversy, his conception of truth is about as convenient as it is amusing. If, as the French urge, the *raison d' etre* of every volume should be made manifest, this work seems to have been issued without any recognized cause. The pathology of the diseases discussed is not only defective and erroneous, but contradictory. The author's views in regard to the etiology of yellow fever can not be even suspected; following the advice of Talleyrand, he has used language to conceal his meaning. The symptomatology is not given in any classified way, but is curiously introduced into the most irrelevant portions of the history of his cases. These are fair examples of his description of symptoms: "I had seen all these cases, and two hours before night I called at the negro hospital to see two patients; the steward, Mr. Robert Watkin,

had been very bad; had relapsed two or three times; was yellow and much emaciated; looked as if he had had dysentery, and his bowels were troubling him. I recommended prepared chalk and Dover's powders; he got well, studied medicine, and graduated at the Galveston Medical College."

"Dr. Otis, of the Signal Corps, stayed to assist, and he took the disease and died. He sent for me after he had black vomit and was spotted yellow, but perfectly conscious. When he had vomited up more than a pint of pure black vomit, he asked me what it was. I told him black vomit; he said 'that is what I call it,' having reference to our severe disputes about it at the commencement of the epidemic."

"The yellow fever was then raging at Galveston and Houston, and I was afraid to visit either place. Col. Overton Young came through New Orleans and Galveston, from Georgia. In a few days he was taken with a high fever, and I treated him as a mild case of bilious fever; but as he had been exposed to the epidemic at New Orleans and Galveston, I treated him as if he were a case of yellow fever."

"On our return home Boner had the yellow fever, and I treated him as a case of bilious fever that might be yellow fever, and he recovered."

"On my return from Houston, Mr. Dean moved his family down the island six miles, and my wife and step-daughter went down with him. The day after they left, my wife was taken with a chill, and Mr. Dean sent for me. I went down and stayed with my wife until she recovered. She had nearly as bad an attack as I ever saw, where the patient did not turn yellow, and was at one time threatened with black vomit. Complained of great burning in the stomach, and hallooed and screamed until I covered up her chest with a mustard plaster, and gave her some valerianate of zinc, when it stopped, and she fell asleep."

"Another, an old sailor, came in partially delirious, but could walk about. I put him in an upper ward, as all was full below. Gave him a good bed at 12 M. At 5 o'clock I met him coming down with his bed all rolled up and tied with the ropes we had tied him down with. I asked him where he was going; he

said, 'out in the yard, it is too hot for me up there.' I told him it would kill him and he must go back with me. We carried him back by force and tied him down again. That night he untied himself, went out on the back gallery, and either jumped or fell off; his head struck an old stump, which cut him badly, and from which he bled profusely. He was brought back and tied the third time, and on my rounds next morning I found him conscious and his fever gone; he recovered without any further trouble, and is now a wiper of bottles in a drug store at Galveston."

If space allowed much more amusing matter could be given.

The treatment adopted by the author is certainly such as to confound the most astute and analytical reader. He describes the treatment of his son and of himself thus:

"He did not vomit after the first pill was given, and he had repeatedly tried to swallow the solution and quinine in pills without the covering. I gave five-grain pills every half hour, until six were taken. I saved my own son in congestion of the bowels by a quinine bath when I could not get injections to be retained, and he could not swallow quinine in solution or in pills. I put him in every half hour for ten hours, and kept him in just two minutes. In this way I made his head sing and kept it singing for fourteen hours. I was saved myself in an attack of congestion of the stomach by blisters and seven mustard plasters kept on all day, and my brother-in-law to keep my hands under the cover. I could not swallow water, and the quinine over the blisters could not be applied in time, and injections were not tried. When I reäcted I was nearly a solid blister, as all the mustards took off the skin; I had them down my back, on my hands and feet, and a blister over my stomach and on the nape of the neck. The fourth day after reäction I was as near the lower regions as I have ever been, and *hope I ever shall be.* The skin came off from between the tendons on my legs and arms, and I had great sores on my breast and abdomen. I believe I should have died but for these severe counter-irritants. I was then a student of medicine in Raleigh, Tennessee, and the use of quinine endemically was not known, and that by injection never practiced by the physicians of my

acquaintance. My mind was perfectly clear, and I distinctly remember everything."

"I once brought a little negro girl to consciousness by taking the hot smoothing iron with which the mother was ironing clothes, and applying it to the soles of the feet and calves of the legs until it blistered, after mustard had failed to make any impression. I once saved a negro man by opening the temporal artery, when I believed he was in the convulsions of death. He came to as the blood ran out, and cried, 'there! there! I am easy now,' and was sitting up in bed the next day. I once saved a young man by giving him pills of quinine in raisin hulls, when water would not stay on his stomach, and he was both salivated and blistered. I did not have time for injections, or for the application of quinine on the blister."

"About the 28th of July Surgeon Taylor was taken, at Exchange Hotel. Drs. Rowe and Adams attended him until he was very bad, and then they called me in. At my second visit he was much oppressed, and we were holding him up to give him some medicine, when the lightning struck the steeple of the Presbyterian Church in an adjoining lot, making a bright flash and a loud report, which killed him instantly as if it had actually struck him. All patients suffer more during thunder showers; I have watched their effects ever since."

"As soon as I got up, so that I could practice, I was called to see Mrs. Muller's little girl, on Post Office street, in the same block with Edwin Brock; this was a similar case, in all respects, to his. I did not let her eat butter and toast, and she got well."

The author's experience in yellow fever borders on the marvellous; he says he has treated several thousand cases. Of the last epidemic and his labors, he thus writes:

"I treated this year six hundred and sixty-seven cases in City Hospital; one hundred and ninety-six in Post Hospital; forty-two children and over two hundred adults in private practice, making in all over ten hundred and sixty-three cases; some days prescribing and visiting two or three times, over two hundred cases. I saw in consultation and at the other hospitals, at least one hundred more; losing twenty-four per cent. in City

Hospital, which was under my immediate and entire control. It was a general hospital; but very few females or children were received. Patients were admitted from city, county, United States marines, from foreign vessels, Hebrew Benevolent Society, and Howard Association. Several were received in a dying condition, and two died before we got them to bed. The Howard Association sent a committee to examine their patients every week, and they reported in the city papers that they sent their poorest and worst patients—nearly all men—to my hospital, and we cured more than were cured at St. Mary's, where they sent nearly all their women and children, best patients. The sweating plan was strictly followed at this institution, and this was the main cause of their great loss. I had great trouble to have my directions carried out in private practice. They would sweat them with hot bottles, baths and teas, and restrain them from water, in spite of me; I had a negro nurse belonging to the Howard Association to throw away my medicine and give his own; he had the impudence to acknowledge it to me. I lost my patient, and I drove him off. If another ever serves me thus again I intend to have him tried for murder, for it is nothing else. I lost an Irishman on Avenue B, from the family keeping him too hot, in spite of me. They would give him hot teas when I was gone. I bled him and did everything I could to break his fever, but it never cooled until death, though he sweated profusely. I bled three other cases this year—one died and the other two recovered; all four were hopeless cases, nothing would break their fever, so we bled them, and two out of the four were saved. All were stout, with ruddy complexion, and had a high bounding pulse. They all took the three and three powders."

The contributions of papers from other sources are interesting and instructive. The book is acceptable on account of the excellent tables, showing the yellow fever epidemics of this country; number of cases; localities; mortality, etc., etc. These, if accurate, redeem the whole volume from early oblivion.

The lithographs of the liver, as seen at the post-mortems of those who died of yellow fever, resemble more nearly the masses of molasses candy seen in the confectioner's window than any

known pathological specimens; and the chromo-lithograph of the head and face of one with yellow fever may be exactly imitated by covering any plaster of Paris bust with bronze powder. It is absolutely hideous, and it is only to be hoped that no woman, "in an interesting way," may ever see it; for if ever this dire catastrophe occurs, and the views of Huxley have the ghost of truth in them, there will arise a race of men more terrible than an army of Calibans. The Medical Profession is brave to a fault, but if this picture is generally published, farewell to the sublime spectacle of medical recruits and volunteers, wherever yellow fever sufferers most need a medical friend and protector. Medical men will rush into "the jaws of death," but not if they have to carry such a physiognomy into the world eternal.

The map showing the prevalence of yellow fever, "the zone," so to speak, is very faulty; the zone embraces Kentucky, Southern Illinois, Indiana, Ohio, and most of Pennsylvania, with New York and parts of the New England States.

At the close of the work the author gives the anatomy, the physiology, and pathology of the spleen. For what reason no one can tell. A description of the grave of Washington, represented by an unfortunate female crying at the Mount Vernon ice-house (mistaken by her for the mausoleum of "the father of his country"), would have been not less appropriate, though not more amusing. It is a bundle of errors, making the previous obscurity and dullness of the subject more Cimmerian than ever. Indeed, when one has read Dr. Dowell on the spleen, he is even infinitely more lost than were ever the ten tribes of Israel. It is possible that Charlie Ross may be recovered, but the rash reader who endeavors to study the spleen under the guidance of this unfortunate author, is beyond recovery or redemption.

Perhaps nothing will give the reader so just a picture of the author's style and so true a conception of his lucid exposition of any subject treated by him, as the following remarks upon "hæmorrhagic jaundice"; it will be seen that the pathology, etiology, symptomatology, and treatment of this disease are presented with rare aptitude and fidelity. The whole feast is furnished; "*ab ovo usque ad mala*":

"I became gradually yellow in December, 1870, but was able to be up and about. I had had, for two years previous, fever and several severe attacks of bilious cholic, relieving myself by taking chloroform in teaspoonful doses, or by inhalation, with quinine and calomel to break the fever. While under the influence of jaundice, I was called to see a surgical case at Houston, and after I had operated on the case, feeling much fatigued, I rode out to the fair grounds and was caught in a slight sprinkle of rain. On my return I felt chilly and had a hard ague that night; vomited all night; was very sick; left my patient (though I had high fever and was still sick at my stomach) and went home on the cars. My fever cooled in seven or eight days; was partially delirious. Professor Rankin, who attended me, said I had hæmaturia for two days. I got better and continued my lectures in the college, but my skin continued yellow. I was up and down until the last of April, when I had another high fever, with pain in my gall-bladder and neuralgia in my head, which was dreadful. I took chloroform almost continually to relieve the pain. At last I dreamed it was my teeth, and sent for a dentist and had seven taken out. I began to improve, and as soon as I could sit up, I started to Philadelphia and attended the American Medical Association meetings. Staid in Philadelphia two months; took prescriptions from every one that would prescribe for me.

"I went to New York on the 4th of July, and staid there a month. One day I had a hard shaking ague, shaking even the bed at Metropolitan Hotel. I took calomel and quinine, twelve grains, in six pills, one every two hours, for two days, and was up again and about, and could walk around, but no change in my urine or skin, both were still very yellow. I returned to Philadelphia, was always constipated, and took seidlitz powders, citrate of magnesia, Kissingen water, and many other things, but all did no good. My landlady at Philadelphia said she would cure me. She had some pills that cured her son when he came home from the army in Virginia. He was as bad as I was, and many doctors had worked with him and had not cured him. She gave me three of Bragg's pills. I took one dose before I left Philadelphia, and another in Washington, D. C.,

where I stopped. These purged me and I had the diarrhœa for two whole years afterward. At times I would take a pound of chloroform in a night, to stop the pain in my liver and to check the diarrhœa.

"I had been having toothache before I took the diarrhœa, but paid no attention to it. I had such severe pain in my head that I called for chloroform and took it for seven days; every time I waked up my head would ache, and I would take the chloroform; all the doctors that my wife sent for failed to relieve me. At last she put a large blister over my stomach, six by six, and when it drew it brought me to my senses, for I had not recollected anything for six days, and had taken and wasted eight pounds of chloroform.

"My finger and toe-nails were soft from the chloroform, and I could belch it up. I took a warm bath, which helped me very much. That night the neuralgia returned, and instead of giving me chloroform, they gave me brandy, which made me furious, and my sufferings worse, until they were compelled to give me chloroform. I told Dr. Bibb it started in my teeth, as it did before I went to Philadelphia, and one night I dreamed it was my teeth and sent and had seven pulled out, and I got better; so the next morning I had all my upper teeth taken out, but one root was broken off. It pained me so that after dinner I went to Dr. Fielding's and had it taken out. My neuralgia did not return, and we went to Dallas that night, on the cars. I lay all night with my head in the window, and the cool breeze kept me from fever.

"In April, I went to Marshall, to attend the meeting of the State Medical Association, and while in Marshall I became badly constipated. I went away to Jonesville, and went out with Dr. Knox, to see one of our patients; had to use a great deal of chloroform; it made me very sick, and when we got back to the doctor's I had fever; I told him to make me up some calomel and blue mass pills, and while he was fixing it, I took some chloroform on my handkerchief and fell asleep. I did not recollect anything until Sunday (this was Tuesday evening); when I woke up I was vomiting terribly, my head ached to bursting, and I begged the nurse to let me have some chlo-

roform. They had refused to give it to me, and I had become conscious, but I begged so hard, the nurse left me to beg some for me, but while he was gone, I opened the window, jumped out, and ran as if for my life, to a puddle of water in the field, and laid down in it, I was so hot. They brought me back, but as soon as I was in bed I became unconscious, and did not recollect anything until the next Wednesday. When I became again conscious, and vomiting terribly, I was yellow, almost livid. They would not give me any more chloroform, and I continued to suffer; I would get so hot, I thought I would die; I belched up the chloroform for a week; my finger and toe-nails became soft, as before; my mouth and throat very sore; the water brash was terrible; saliva poured from me. I believe chloroform produced it, as I had it every time after I had used it to excess. My finger and toe-nails became soft, as they had done on the former occasions. I was dreadfully blistered, and even after I got up and rode around, I had to go to bed for a week, as the blistered surfaces threatened to mortify. They are still sore, and itch and burn, but they no doubt saved my life each time. Nothing I took did me any good but blisters. Chloroform always eased me, and I believe, until the last spell, it did me good, and allowed the gall-stones to pass off, and I would get easy. Mercury always made me more yellow; seemed to excite the liver to action and the secretions could not pass off, except through the kidneys and skin. But I was compelled to take it to break my fever, as quinine alone made me worse and increased my fever." These are his views of hæmorrhagic jaundice.

One can understand, after having taken a few doses of Cannabis Indica or a gallon or so of nitrous oxide gas (to aid the imagination), how Dr. Dowell conceived the idea of becoming an author, for the reader with himself as with the author would realize the truth of the trite couplet, "shallow draughts intoxicate the brain", but that any one could have been found so cruel as to publish or to aid in publishing such a fanfaronade of heterogenous stuff transcends all the teachings of even fabulous history. When a publisher for such matter can be found, no one need be in despair of the ultimate finding of Sir John Franklin, Symes' polar tunnel through the earth, or even the

tomb of Moses on the sublime altitudes of Pisgah. When Byron read the tragedy of Manuel, he declared it to be "as wild a nightmare as was ever bestrode by indigestion." This is perhaps the best comment that can be made upon this remarkable volume.

The reader yet lays it down with the warmest admiration for the bravery and enthusiasm, the kindness and energy of the remarkable author. There is, however, something to redeem his volume; for though a failure in medical pathology, it is a grand success in medical comedy. Indeed, in the whole domain of literature, there is nothing more comic, unless it be the volume of Mother Goose's Melodies; while in the medical library there is only one work to approach it in comic absurdity; the well-known Louisville pamphlet on the Prehistoric Ages of Scandinavia.

There are many classical dilemmas mentioned in history; that of Cæsar on the banks of the Rubicon; Napoleon at Moscow; Columbus, when his sailors mutinied in mid-ocean; but the dilemma transcending them all must have been that of Dr. Dowell, when, after having written his volume, he was called upon to write the title-page.

Statement of Facts in Regard to the Controversy between the Faculty of the Atlanta Medical College and Certain Members of the Georgia Medical Association, Atlanta, Ga. Georgia Book and Job Printing Office.

This pamphlet is an exposition of facts hitherto concealed from the Public. It shows why Dr. Thomas S. Powell (the editor of the "Southern Medical Record," Atlanta, Ga.,) was expelled from the Faculty of the Atlanta Medical College, and gives the reasons of the Faculty for their very decided action. "Dr. Thomas S. Powell was expelled from the Faculty on account of unprofessional conduct, and particularly for the constant and persistent publication of himself in newspapers as peculiarly skilled in the treatment of diseases peculiar to women; having indeed established a newspaper for this purpose, rendering himself thus odious to the Profession throughout the State, and damaging the reputation of the Atlanta

College." The pamphlet also furnishes an extract from the minute-book of the Faculty, showing that when Dr. Powell was expelled, the Faculty and the Profession regarded his "Ladies' Home," advertised in the papers, as "a fraud upon the Public." The accusations against Dr. Powell in regard to this "Ladies' Home," the manner in which it was created, and his connection with it, were very constant and severe. The following extract from the minute-book of the Faculty gives their belief in regard to the truth of these accusations: "The accusations in regard to Dr. Powell are generally entertained, and the Institution in question is generally regarded as an imposition upon the Public." Such language from colleagues is certainly very severe, and no ordinary irregularities could have induced them. The Faculty declare that the Emeritus Professorship alleged by Dr. Powell to have been conferred upon him by the Trustees and Faculty was never so conferred, and the Trustees, Dr. Joseph Thompson, Judges Whittaker and Eggard deny all knowledge of such a document; while Dr. A. Means, the Secretary of the Faculty, writes as follows: "I have no recollection that this subject was ever presented to the Faculty; and I can not; therefore, recall any action of that Body authorizing me to make such a proposition. I have no recollection that the Faculty tendered through myself, or any one else, those terms." This language from an officer of the Faculty and a clergyman, is certainly very decided; and in thus interring Dr. Powell, Dr. Means could not have been more emphatic if he had used the familiar epitaph, *hic jacet;* the pun would have been excusable, as all will admit, after the record presented.

Dr. Powell is, unfortunately for himself, often aggressive as a journalist, but with such a history, he must expect every one to offer the statement, that Dr. Means should have made in regard to him, HIC JACET: here he lies.

Books and Pamphlets Received.—Hay-Fever, or Summer Catarrh; its Nature and Treatment. Including the Early Form, or "Rose-Cold"; the Later Form, or "Autumnal Catarrh"; and a Middle Form, or July Cold, hitherto undescribed. Based on original researches and observations, and containing

statistics and details of several hundred cases. By George M. Beard, A. M., M. D., Fellow of the New York Academy of Medicine, etc. New York: Harper & Brothers. 1876.

An Address on Some of the Leading Public Health Questions; with remarks on the extent of swamp-lands in the United States, and their reclamation as a sanitary and economic measure. Delivered at the opening of the third annual meeting of the American Public Health Association, Baltimore, Md., November 9, 1875. By J. M. Toner, M. D., President of the Association.

Report on Vaccination, read before the Ohio State Medical Society, Put-in-Bay, June 20, 1876, being an inquiry concerning human vaccine, vaccino-syphilis, and animal vaccine; with an appendix containing letters from Hélia, Sigmund, Seaton, M. Guerin, Zeissi, Neumann, and Widerhofer. By Wm. B. Davis, A. M., M. D., Professor of Materia Medica and Therapeutics, Miami Medical College, Cincinnati, Ohio.

Diseases of the Bladder, Prostate Gland, and Urethra, including a practical view of urinary diseases, deposits, and calculi. Illustrated by wood engravings. Being the fourth edition of the Irritable Bladder, revised and much enlarged. By Frederick James Gant, F. R. C. S., Surgeon to the Royal Free Hospital. Philadelphia: Lindsay & Blakiston. 1876.

Remarks on Intra-Uterine Polypi, with Special Reference to their Diagnosis and Surgical Treatment. By A. Reeves Jackson, A. M., M. D.

Transactions of the Medical Society of the District of Columbia, July, 1876. Vol. III., No. 2. Committee on Publication, Drs. Kleinschmidt, Ross, and W. W. Johnson.

Transactions of the Medical Association of the State of Alabama. Twenty-ninth Session, 1876.

Orthopedic Surgery—Deformities of the Lower Extremities. By Professor Van S. Lindsley, M. D. Read before the Medical Society of Tennessee, April, 1876.

Chorea—its Cause and Treatment. By George T. Stevens, M. D., Albany, N. Y.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Domes and Steeples.—The following, from the Baltimore Sun, is quoted by the American Builder without comment or correction:

"The altitude of the dome of the Capitol makes that building the highest in America, it being 287½ feet from the floor of the basement story to the crest of the statue. There are only four edifices in the Old World which tower higher toward the clouds: St. Peter's, at Rome, which is 458 feet from the pavement to the top of the cross outside; St. Paul's, at London, which is 404 feet; the Cathedral of St. Isaac, at St. Petersburg, which is 363 feet; and the Hotel des Invalides, of Paris, in which is the tomb of the great Napoleon, which is 323 feet high.

"In the United States, the steeple of Trinity Church, New York, is next in height to the dome; Bunker Hill Monument second, and the Washington Monument, in Baltimore, third."

This paragraph is very inaccurate, as our friend of the Builder ought to know. We will not attempt to enumerate all the buildings of the Old World that overtop our Capitol, but will mention some that occur to us at the moment. The Great Pyramid of Egypt is usually called the highest, being about 475 feet high; but the ugly modern cast-iron spire of the cathedral at Rouen, in France, is said to be 482 feet high. The builders aimed to surpass the famous Strasburg spire, which is about 468 feet. In Belgium there are many lofty towers and spires; in Bruges, that of the Church of Notre Dame, 390 feet (Murray says 442), and the "Belfry," 350 feet; in Ghent, the Belfry, 386 feet; Antwerp Cathedral, 402 feet; and Mechlin Cathedral, 326 feet. In Holland, the steeple of St. Lawrence in Rotterdam is 297 feet high, and that of the cathedral in Utrecht is 338, formerly 364 feet. The cathedral at Prague has a spire 323 feet high, said to have been 520 feet before the fire of 1541. St. Stephen's in Vienna measures 453 feet, the cathedral at Ulm, 334 feet, that at Freiburg in Baden 385 feet,

and that at Metz 387 feet. Munich has a steeple 357 feet high and another of 290 feet. In France, Chartres Cathedral has two spires of 339 and 371 feet, Amiens Cathedral one of 392 feet, and Dijon one of 300 feet. In London there are the three towers of the Parliament Houses, about 300, 320, and 340 feet high. The spire of Salisbury Cathedral is 400 feet high, and the fine tower of old St. Botolph's at Boston, Eng., is more than 300 feet.

In this country Boston has two steeples higher than Bunker Hill Monument: the Central Church on Berkeley street, about 260 feet; and the new Old South, about 245 feet. Trinity Church in Brooklyn is, we believe, of about the same height as Trinity in New York, which is 283 feet. There are several other spires in New York (Grace Church, Dr. Hall's, etc.) that must be higher than the Washington Monument in Baltimore, which is said to measure 212½ feet. The steeple of Park Street Church in Boston is 218 feet high.—*Bost. Jour. Chemistry.*

The "Medical and Surgical Reporter" of September 30, 1876, states that Dr. Gueneau de Mussy, in a communication to the "Gazette des Höpitaux," points out that one of the most frequent functional signs of cardiac affections is the difficulty that patients experience in preserving the horizontal position during sleep, generally requiring to have the head raised by several pillows. Nevertheless, it is not always the case, for there are some who can bear it, and some who even prefer it. These latter are generally affected with aortic insufficience, and he explains the peculiarity thus: When the aortic orifice, incompletely closed by its valves, permits a reflux of blood to the ventricle, the reflux is accomplished under the double influence of the weight of the blood column and the contraction of the aorta. The first of these influences acts to its full extent in the vertical position of the trunk, and is almost annihilated in the horizontal, so that, suppressing one of the coëfficients, the inconveniences of the lesion are lessened, and a relief produced which instinctively makes the patient seek the horizontal position. It is otherwise in lesions of the auriculo-ventricular orifices; the vertical position of the trunk renders the reflux of

blood into the oricle less easy, and is instinctively chosen by the patient. In patients suffering from cardiac affections there is another circumstance which exercises a considerable and probably preponderating influence on the attitudes that they choose in decubitus. It is the state of the respiratory organs. Emphysema and pulmonary congestion demand the position that leaves the greatest freedom to the parts of the lung that can respire. The relative slowness of pulmonary complications in cases of aortic insufficience is one of the principal causes that permits patients to assume the horizontal decubitus; whilst in mitral lesions these complications supervene much more rapidly.

A People without Consumption.—Dr. Wight, of Chattanooga, Hamilton county, Tennessee, in a little pamphlet of eight pages, gives an interesting account of the people, four thousand in number, who live on Walden's Ridge. He has not been able to find that a well-authenticated death from consumption ever occurred among the natives. The ridge is from two thousand to two thousand five hundred feet high. The mercury has never been known to be above 95° F. or below —10° F. The people live mostly in log-houses, which admit plenty of fresh air, burn wood, wear no flannels, and live on corn-bread, bacon, and coffee. They are mostly farmers, and very few appear to work hard. The Cumberland table-land, of which this ridge is a part, seems to offer an inviting field for those predisposed to pulmonary complaints. It comprises territory enough to make a good-sized State, and "the city of Cincinnati has determined to build a railroad through the centre of that great table-land in the north part of the State, connecting with Chattanooga in the southern part."

Case of Vaginal Cyst.—By D. Brainerd Hunt, M. D., Physician for Diseases of Women at Mt. Sinai Hospital, Out-Door Department, N. Y.—Mrs. L., aged forty, married, consulted me a few months ago, with reference to the following condition: For nearly one year she had been troubled with an itching and burning sensation about the external genital organs, vesical

tenesmus, and often excessive pain during sexual intercourse; these symptoms were constantly becoming more aggravating. Upon examination I found a tumor protruding from the introitus vaginæ, distinctly visible without separation of the labia; it was attached to the lower third of the posterior vaginal wall; and, when brought entirely into view, by lifting the anterior wall with Sims' speculum, appeared like a distended intestine, smooth and glossy. There was slight prolapsus, but no rectocele. The vagina surrounding the tumor was considerably thickened.

At this time, Mrs. L. would not consent to any surgical interference; but after four weeks, the pain and suffering having increased, she again sought my advice. Upon this examination I found that the growth had not increased in size, but its smooth surface was covered with a vascular membrane; and whereas, formerly the growth appeared to arise freely from the surface of the vagina, it seemed at this second examination to have its origin in the submucous tissue, and in its growth to have pushed the mucous membrane before it.

After puncturing the cyst, and collecting its contents, a small piece of the wall was removed, and the inner surface of the cyst freely painted over with tincture of iodine. The cavity was one and three-quarter inches long, and three-quarters of an inch wide. The recto-vaginal septum was left very thin.

The parts healed rapidly, and the result was entire relief from the symptoms previously mentioned.

The contents of the cyst consisted of a thick mucilaginous fluid, which, upon microscopic examination, contained epithelial cell and globules of fat. The cyst wall was vascular, and made up of densely-packed bundles of connective tissue, and its internal surface was lined with pavement epithelium.—*American Journal of Obstetrics.*

New York Obstetrical Society.—Dr. E. R. Peaslee related a case of Uterus Didelphys Septus et Vagina Septa, which he had lately observed in a married woman who was sterile after six years of marriage, for which reason she consulted him. There were two vaginæ, with perfectly developed septum, the right

vagina being larger than the left, owing, doubtless, to greater use. There were also two perfect cervices and ora, the right os being slightly lower than the left. Each half of the uterus was straight and normal; the septum ran through up to the fundus uteri, as is always the case when the vagina is double. The uterus was not bicornis. The vaginal septum was removed by the galvano-caustic loop, and scarcely a trace of it could be felt when the wound was healed. With her two uteri and perfect ora it would seem as though there could be no obstacle to impregnation.—*Amer. Jour. of Obs.*

Mania a Potu.—The following paper, by L. A. Dugas, M. D., of Augusta, Ga., was read before the Medical Association of Georgia, in April, 1875: Having been forcibly impressed, during my pupilage, with the fatality then attending mania a potu, as treated in the hospitals of our large Northern cities, I determined, upon the commencement of my professional career, to adopt a different plan of treatment, and to carefully note the results. At that time practitioners usually relied principally upon opiates, in one form or another, to induce sleep, and upon calomel to correct the secretions, both of which were considered necessary to success. The opiates were often administered in enormous quantities, and the cases which did not terminate fatally, were not unfrequently terribly salivated, making convalescence both protracted and precarious. The violence of the delirium was made so great as to require the patients to be confined in the straight jacket, then in common use in other forms of mania.

I now feel it a duty to lay before the Profession the result of my long experience in a more formal manner than that of clinical instructions, made to the classes of the Medical College of Georgia for upwards of forty years.

My plan of treatment is very simple. It consists of the administration, once or twice a day, of cold water affusions; of such food as may be relished; and sometimes of two or three small drinks of toddy per day. If the patient is very unruly, one or two intelligent persons should attend him day and night as long as it may be necessary.

For the affusions a large tub should be provided, if a bathing tub be not convenient, three or four buckets of water, with a pitcher and napkins placed near the tub, and one or two assistants. The patient should then be stripped of all garments and seated in the tub, the aid's hands should be placed upon the patient's shoulders, so as to prevent his jumping up, and the physician should then pour one pitcherful after another over the patient's head, in a regular stream, which will pass down over the entire body. The affusion is to be continued from one to three minutes, *by the watch.* I have never seen one who needed or could bear it over three minutes. However wild or violent the patient may be, he soon becomes quiet, begs most piteously to be released, and makes the most solemn promises to be quiet thereafter. The pulse, which was full and strong, soon loses the peculiarities, and becomes small and frequent. If the affusion be continued too long the pulse may become almost imperceptible. The physician should therefore watch this carefully, and cease whenever the patient is entirely rational, and the pulse sufficiently subdued.

Let the aid then rub the patient rapidly, and with force until the skin is dry, and red with reäction. Place him then promptly in bed, cover him warmly, and tell him to go to sleep. The room should be darkened, and a nurse left near him. In most cases the patient will be asleep in a few minutes, and continue so more or less long, according to his previous loss of rest. He will sometimes sleep six or eight hours, and awake perfectly rational. He should then be fed, and allowed a little toddy, if he craves it.

If this affusion be administered in the morning, and the relief from delirium be not complete at night, it should then be repeated; but I am in the habit of repeating it every morning until perfect restoration, which may vary from two to six days. Too much attention can not be given to the taking of food, by complying with the caprices of his appetite or taste.

The affusion should always be done in presence of the physician, as very few nurses can be trusted for its proper administration and timely suspension. If the bowels are too slow, an enema of cold water will soon empty the rectum. I never allow

the use of laxatives, and still less of cathartics, lest unnecessary purging be caused. The fact is that patients have usually eaten so little during the attack that there can rarely be any injurious accumulation in the intestines. Diarrhœa must be immediately checked by ordinary astringents, avoiding opium or camphor. During the whole management of the case, I eschew all narcotics, with the exception of the toddy as above stated.

We know that while some cases of this disease occur *during* the excessive use of alcoholics, others come on *after* the cessation of these potations. Hence it is that we should discriminate between them, and advise toddy only for those who seem to suffer from its absence. The other class of cases do better without it.

Now, as to the success of this plan of treatment, I have to say that, with one exception, I have never lost a case when called to see it before it was too late to expect good from any treatment, and these have been very few. In the exceptional case the patient had old complications, which would have rendered any treatment unsuccessful.

Transactions of the Philadelphia Obstetrical Society.—Dr. Githens read the following report of a case of Viability of a Six-months' Fœtus: Mrs. E. P. had been under my treatment for menorrhagia, the menstrual flow being profuse and occurring every two weeks. Her husband had been living in another city, kept there by business. He made a short visit, the first in many months, to his home on the 24th of November last. The menstrual flow appeared the succeeding week, and lasted about five days. Early in January it appeared again slightly, passsing off in one day.

Fœtal movements were felt about the first of April, and on May 20th my patient was delivered of a female child, about thirteen inches in length. It had but little hair, and the nails of the fingers and toes were imperfect; respiration was established without artificial assistance, and the child is living and growing nicely. I did not allow it to be washed, and had it wrapped in cotton, which was changed daily. The cotton dressing was continued for two or three weeks. It was nourished

on milk and cod-liver oil until able to nurse, the secretion of milk having meanwhile been encouraged by the loan of a sister's child.

This infant has shown its ability to support an independent existence at the early age of one hundred and seventy-eight days, or six calendar months.—*Amer. Jour. of Obs.*

MEDICAL NEWS.

'Nulla dies sine linea."

Indiana, Illinois and Kentucky Tri-States Medical Society.—The next annual meeting of this attractive and useful Society will take place November 21st at Vincennes, Indiana. Many prominent physicians have promised to deliver addresses.——Professor Gustave Simon, of Heidelberg, died, of aneurism of the arch of the aorta, suddenly on August 28th.——Dr. Sibson, the eminent anatomist of London, England, died September 7th.——The diplomas of art, law, medicine and music issued in New Zealand are officially recognized in Europe. The earth moves.——South Africa is to have an International Exhibition. The earth is moving faster.——All physicians will be glad to learn that Dr. Gurdon Buck, of New York, is recovering.——Yellow fever is rapidly abating at Savannah, Ga. It has destroyed on an average eighteen per day since the commencement of the epidemic. The disease was introduced into Brunswick, Ga., from the West Indies.——Mr. W. Crookes, in the London Times, reports the results of his weighing light. It weighs thirty-two grains per square foot.——Dr. Axenfield, of Paris, the eminent pathologist, is dead.——Dr. Edward Warren, of North Carolina, writing from Paris, says: "The rank and file of the Profession in America are better instructed in the principles of medicine and are more skilled in the management of disease than the corresponding class in any of the

European countries visited by me."——Before the late International Medical Congress, Dr. N. S. Davis, of Chicago, read an interesting paper, in which he stated that there are 62 regular medical colleges in operation in the United States. There were 18 low-fee medical colleges whose delegates met in Philadelphia last June, when the Jefferson Medical College tendered the use of its rooms, and was represented by one of its Faculty; the University of Pennsylvania was also represented, and so was the College of Physicians and Surgeons, New York, and the Long Island College Hospital. In all 18 low-fee schools; two colleges from the city in which the convention met; and only two high-fee schools from a distance. This squad termed itself "The Convention of American Medical Colleges"; about one-third only of these colleges recognizing the movement. As far as numbers were concerned, it was not up to respectability; but when it resolved that nobody was in any way responsible for what anybody or everybody did, it sank far below respectability, and bordered on the ridiculous. When this convention is claimed to be a convention of the colleges of this country, the figures and facts here given will of course be remembered. The proportion of those in convention to those not recognizing it, and the utter poverty and brevity of action manifested, remind the reader of that old nursery story: "Three men of Gotham went to sea in a bowl; if the bowl had been stronger, my song would have been longer."——The contemplated convention of the high-fee schools (in which all not repudiating the low-fee system can not be admitted) will, it is hoped, accomplish something useful and effective.——The medical officers at Savannah have succeeded in securing the issue of an official paper warning all absent from that city not to return until there has been a killing frost. Even after this has occurred, it would be more prudent to wait for two or three weeks before returning.——The Profession will lament the death of Dr. Samuel St. Johns, so long the Professor of Chemistry in the College of Physicians and Surgeons, New York.——The Obstetrical Section of the late International Medical Congress was regularly attended by females!! "double rows of ladies sat statuesquely during every day's meeting!"——Sir William Fer-

gusson, whose death was expected and feared so much last summer, is fast recovering.—— *Curious Incompatibility.*—Chlorate of potassium and iodide of potassium are both entirely harmless in suitable doses. Furthermore, these two salts do not reäct upon each other in solution, even at boiling heat. Yet it has been proved that when they are administered together they do combine in the stomach, producing iodate of potassium, which is poisonous. M. Melsens found that dogs could take the chlorate or iodide in doses of five to seven grammes with impunity, but that a mixture of the two killed them in a few days, with the symptoms of poisoning by iodate of potassium. This combination must, therefore, be avoided. Indeed, as a general rule, the chlorate is so unstable, and so ready to give up its oxygen, that it can not safely be combined with any substance capable of oxidation—*Amer. Jour. of Pharm.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

Training School for Nurses.—When Florence Nightingale returned from the Crimea, where during that terrible war she had sacrificed all of her time and much of her health, in nursing the British soldiery, it will be remembered that she was given a handsome sum in recognition of her splendid and devoted services. Instead of appropriating any portion of this donation for her individual comfort or welfare, she devoted the whole of it towards the establishment of a Training School for Nurses. Those interested in this philanthropic Institution are aware that it has been eminently successful, and is now one of the most useful charities in that greatest city of charities, London. It has steadily improved in the character of its administration and in the status of those prepared by it for public service. At first, the women who entered the Institution were representatives of that large class known as housekeepers; then

those recognized as governesses sought admission; but now among the inmates of the school may be found females representing the very best classes of English society. As might be expected, there has been an earnest effort made on the part of the inmates to establish in the Institution lines of social demarcation, and to create among themselves the privileges and the pleasures of caste. This, however, has all been nipped in the bud, and all are made to feel that among women, as among men, "rank is but the guinea's stamp"; that whatever differences society may please to establish in regard to rank, in an Institution devoted to such work, training must be enforced equally and impartially with all. High-born dames, delicately bred, are made to lay aside all the assumptions, the sloth and the pretensions of their class, and are made to feel that the duties discharged, like the clothing worn, must be absolutely uniform. To sweep; to dust; to play the role of cook and scullion; of chamber maid and dining-room attendant; to learn the specific duties of nurse, in their relations to medicine, to bed and body clothing; to bandaging and to dressing; these are the common requirements and duties exacted of all. All are in a sense new to them made "ladies" (as the name implies), the breakers of bread.

Miss Nightingale has achieved for her Institution a great success, and other cities have now these admirable training schools for nurses. Why can not every city establish and enjoy them? Why can not every large hospital have a department of this kind created? The time then would soon come to all, when throughout the land each could have in sickness the blessed administrations of woman, trained, tried and true, and say in the depth of thankfulness with Scott—

> "Oh woman! when pain and anguish wring the brow,
> A ministering angel thou."

Which of the American cities will willingly be deprived hereafter of that great blessing for the sick, trained and accomplished nurses? To work in so noble a field is woman's great privilege and triumph. It is that manifestation of woman's rights in regard to which all will give her great aid and wish her Godspeed.

RICHMOND AND LOUISVILLE

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—*The Use of Chloroform in Obstetrics.* By THOMAS HILL, M. D., of Danville, Mo. [Read before the Linton District Medical Society, 1876.]

Mr. President and Gentlemen of the Linton District Medical Society,—I almost fear to approach the subject on which it is expected that I shall address the Society to-day. But as I have been appointed by the chair, and feel that it is incumbent on every member to do his best in elucidation of the subject assigned him, craving your indulgence for the crude way in which my ideas are expressed, I name my subject—The Use of Chloroform in Obstetrics.

I am aware, gentlemen, that this is a question which has been discussed by leaders of the Profession with a good deal of feeling, both pro and con, therefore I feel more keenly my inability to add anything of value on the side which I wish to advocate.

In the discussion of the subject, I shall not go into the use of chloroform in instrumental cases, or in convulsions, or other complications of labor, believing that it is admitted by all that in these cases it ought by all means to be used; but I wish to advocate its use in *all* cases of labor for the alleviation of the sufferings of the patient. Who among us has not had his heart wrung by the earnest appeals of a suffering woman to do someting to ease her pains, to give her one little moment of

rest, and although we know that her pains will be relieved in time, yet, holding as we do a remedy in our hands which we know will give her ease, yes, a remedy perfectly safe in administering, why withhold it? A distinguished philosopher being once asked what constituted the highest pleasure of which human nature is susceptible, replied, "the relief from pain." Consequently he who is able to annihilate or even mitigate pain, is conferring upon his fellow-men an inestimable blessing, and it is undoubtedly the fact, that from the earliest to the latest moment of man's career on earth, the greatest obstacle to his happiness and usefulness is the existence of pain in some form or other, and his ingenuity and scientific arguments have been directed with all the energy with which he has been endowed to invent a means to extirpate this universal and terrible affliction. Yet we are told that because woman is woman, and ate of the forbidden fruit, that therefore she must bear the curse, and that we must do nothing to alleviate her pains in labor; all sin came into the world by the disobedience of our first parents, and by or because of sin, disease and death. As well say then that the physician should not attempt to relieve any other pain. It has been objected by some that because labor is a physiological process, that therefore any interference becomes "meddlesome midwifery," and is therefore to be discontinued. I was much struck by a remark made by Dr. Wallace, Professor of Obstetrics, etc., in the Jefferson Medical College, in an article in the "American Journal of Medical Sciences," July 1870, on the Use of the Forceps.

He says: "Objectors to the forceps say that labor is a physiological process, and must not be interfered with, except in the last extremity. Who has not heard this remark, or one somewhat like it? Now, I would insist that labor is not a physiological process, unless it be *natural* labor, when the woman can deliver herself safely and with safety to her child. All other labors are preternatural."

Chloroform was first used in obstetrics by that great and good man, Sir James Y. Simpson, of Edinburgh, Scotland, whose name will be handed down to posterity with the praises and thanks of the thousands and tens of thousands of women

who have gone through the throes of labor without suffering or anxiety. In 1847, he first produced insensibility during labor by using sulphuric ether. Soon after he discovered the great anæsthetic power of chloroform, and introduced it to the notice of the Profession. Chloroform was discovered and its qualities conjectured simultaneously by Guthrie, of Sackets Harbor, N. Y., and Souberain, of Paris, in 1831, but it was reserved for Simpson to demonstrate its applicaction as an anæsthetic, and its superiority to ether.

I do not know that it is necessary to discuss the mode of action of chloroform. It is generally admitted that it affects first the ganglia of the cerebrum, next the ganglia of the cord, and lastly the ganglia of the heart. Claude Bernard has demonstrated by very ingenious experiments the electric action of chloroform upon the sensorial element of the spinal marrow. Moreover, by tracing the progress of anæsthesia, he shows that sensation disappears first from the peripheric extremities of the nerves, then from their trunks, and lastly from the centres. Flourens has well shown how chloroform acts upon the nervous centres, abolishing their functions one by one. In virtue of its affinity for the nervous system, it takes away from it each one of its functions in the following order—viz., the hemispheres, the pons, the spinal cord, and finally the medulla oblongata being successively attacked, we witness the disappearance in turn of intelligence, volition, muscular power and sensation, respiration and circulation.

Professor Simpson used chloroform in *all* cases of labor, whether difficult or simple, laying down the rule which he insists is a golden one, that it is to be given during the continuance of the pain, and omitted in the intervals. Administered in this way, it hastens the labor, and no evil ever results from its application. It does not predispose to hæmorrhage, nor to puerperal convulsions, but, on the contrary, tends to ward them off, and when they occur, is the most efficient remedy for them. In giving it to his patients he employs a simple napkin or towel, having discarded all the various inhalers prepared for its administration. He does not measure the quantity, but continues to give it until anæsthesia is induced. He insists upon perfect

rest and the recumbent posture; finally he says: "A man who should whip a poor sick woman with a cat-o-nine-tails, would be considered extremely cruel, and would probably be punished by law for his cruelty. The act would merit some punishment, but he rather thought that the accoucheur who permitted his patients to suffer the cruel pangs of child-birth at this day, was guilty of a sin of omission almost as heinous." So safe has chloroform come to be considered in Edinburgh, that the nurses and old women administer it, and Sir James usually finds his patients under its influence when he arrives at their bedside. [Report of meeting of British Medical Association in Richmond and Louisville Medical Journal, August 6, 1867, by L. P. Y., Jr.] At another meeting of the British Medical Association, Sir James gave as his opinion that chloroform never caused convulsions, puerperal mania, hæmorrhage, or delayed labor.

Dr. Henry Bennett says: "He believes that if it were the law of nature that husbands should take turn about with their wives in bearing children, the men would all at once become violent advocates of anæsthetics."—*Ibid.*

Dr. J. Marion Sims, in a paper read at the forty-second annual meeting of the British Medical Association held in Norwich, August 1874, says: "In my own country the accoucheurs often use chloroform, the surgeons mostly ether. I believe there has as yet not been a single death from chloroform given during labor; while deaths from it in general surgery occur constantly, and for unimportant operations. There must be a reason for this. I believe that it can be explained only on the theory that death from chloroform is, as a rule, due to syncope or cerebral anæmia. Now we know that in active labor there can be no cerebral anæmia, for every pain throws the blood violently to the head, producing fullness and congestion of the blood vessels, thereby counteracting the tendency of the chloroform to produce a contrary condition. It may be said that the recumbent position has some influence in determining the safety of chloroform in labor, and so it has, but it gives no immunity under other circumstances. Chloroform given intermittingly, as in labor, is thought to be less dangerous, but patients in labor are often kept for hours under its influence with

safety, and occasionally it is necessary to produce complete and profound narcosis in some obstetrical operations, and yet I believe I can safely reïterate what I have already said, that no woman has as yet died in labor from the effects of this anæsthetic."

Dr. T. Gaillard Thomas, in a lecture on the "Management of Women after Parturition," published in the "Richmond and Louisville Medical Journal," February 1869, says: "We wish to avoid, if possible, the exhaustion which must follow the efforts of parturition. When the second stage begins, it is impossible to tell how long it will last. It may continue for twenty-four hours. If so, we desire to husband our patient's forces. * * * * The fatigue resulting from labor should, for these reasons, always be prevented, unless some special contraindication exists. There is but one way in which this can be accomplished, and that is by the administration of chloroform or ether. There are many cases in which anæsthetics delay progress, by diminishing the frequency and violence of contractions; these are exceptions. The rule should be to employ an anæsthetic in every case of labor, *during the second stage*, unless some contraindication exists. After a delivery under these influences, patients recover more rapidly, are freer from complications, and show fewer signs of prostration." "The pains of childbirth have been everywhere, in every land, and in all times, referred to as typical of the extremity of physical agony. That such a degree of suffering, so long continued, as it is in the majority of labors, should prostrate the woman who bears it, no one who has seen the effect of an hour of pain in a man who has passed a biliary calculus can for a moment doubt. During the second stage of labor pain is so severe that an anæsthetic not only pleases the patient by giving immunity from suffering, but increases her chances of rapid recovery by avoidance of the exhaustion which suffering induces."

Dr. Karl Schrœder, Professor of Midwifery, etc., in the University of Erlangen, in his work on Obstetrics, says: "According to our views there is never for a moment a doubt of the advisability of administering chloroform in *natural* labor; for it is one of the most pleasant *duties* of the physician to alleviate suffering."

Dr. Ernest Labbé, in an article published in the "Archives Génerales de Medicine," on the use of chloral, says: "If we take into account the effects of chloral upon the muscles of animal life—which are now unquestionable and the more hypothetic ones—which it should have upon those of organic life, we may conclude that, theoretically, the employment of chloral in obstetrics is barely admissible. However, in consideration of the very remarkable results following the use of chloroform with lying-in women, we have reason to hope that chloral, like its congener, will some day disprove the theory."

Dr. A. M. Fauntleroy, of Staunton, Va., uses during the first stage of labor hydrate chloral, but does not believe that it can be substituted for chloroform in the second stage.

Dr. A. Ernest Sansom, Physician to the Royal Hospital for Diseases of the Chest, London, says: "That to relieve the pains of natural labor, only small doses and the early influences of an anæsthetic are necessary; and that these conditions can be fulfilled with no depression, but with even an exaltation of the forces of the circulation."

Having now given as authority such men as Simpson, Bennett, Sims, Thomas, Labbé, Schrœder, Sansom, etc.—Scotch, English, French, German, and American—names well known to the Profession, and whose statements none will doubt, I venture to give my own experience with the remedy. My first use of chloroform in labor was in 1867, and so much pleased was I with its effects in that case, that I have continued it ever since, using it in every case which I reached in time to get an inhalation before the last pain. Since 1872, I have kept a record of sixty-one cases in which I have used it. I think, therefore, I can speak with some little experience. As a rule, I use it only in the second stage of labor; but sometimes, when I find the first stage prolonged, the cervix uteri firm and undilating, and the woman becoming restless and uneasy, I give her a few inhalations, generally with the result of hastening this part of the labor. Very often we find that the labor is delayed even in the second stage by the very violence of the contractions and the intensity of the pain; here a few inhalations will give such ease that in a few moments the delivery is complete; for

we know that unconscious contractions appear to have more potent effects than those which are accompanied by sensation of pain. I use a handkerchief loosely folded, and at the first indication of a pain coming on, pour on a few drops of chloroform and let the patient inhale till the contraction begins to cease. A patient who has once used it, no matter how reluctant she may have been to try it at first through fear, will never have another pain without calling for it. If we delay its use for a while and then give it, most likely she will say, "Why did you not give it to me before? It gives me such ease, and it now seems that I feel stronger and have more confidence that I shall get through." My patients who have had children before, without the aid of chloroform, say that they have a much better getting up, and that they are entirely free from that tired feeling and muscular soreness that they suffered before. I am sure that chloroform does not produce a tendency to hæmorrhage, as I have never had but one case of violent hæmorrhage in my practice, and that was from the presence of a mole or blighted fœtus. I do not know that chloroform has any injurious effect upon the child, and I am not aware that I have more children born in my practice asphyxiated than my neighbors who do not use chloroform, and I have never had any difficulty in restoring those who were so born. In this connection, I will state that Dr. Brodnax, of Texas, reports a case in which he was compelled, on account of puerperal convulsions, to use one pound and one ounce of chloroform; that the woman was kept under its influence for thirty hours, yet the child did not show the slightest sign of its effects, and the mother awoke to consciousness in a few hours, and made as good a recovery as any woman ever did.

ART. II.—*Puerperal Fever, its Causation and Treatment.* By J. D. BLAKE, M. D., Palmyra, Iowa. [Read before the Warren County Medical Association, 1876.]

In tracing this subject from the earliest recorded descriptions to the present time, one can not but feel himself amazed on reading the conflicting opinions of the fathers of medicine and

the medical lights of the present day in reference to this much-dreaded disease. Their etiology and treatment prove conclusively to me that there is but little known about the disease, hence no rational treatment, as yet, has been based on scientfic principles. Then every physician, in this disease, is almost left to be his own pathologist. So much has been written on this subject to but little purpose, men basing their theories upon a hospital practice which have led them to come, saying, Lo! here is Truth. So I fear that the very elect have been deceived on this disease. Then what shall I offer, gentlemen? I can only give you my views based upon my experience. It is said that the term puerperal fever is a misnomer. Why not call it something else? I am satisfied with the name. It assumes so many different phases, and the post-mortem appearances are so diversified, that there is no general name so appropriate as the one above. I therefore shall take into my general omnibus that terrible disease peculiar to the puerpera and be satisfied with the name.

Now let us come to the great question of causation. Is it an independent, distinct disease, depending on an automatic origin, modified by other diseases and the puerperal state? Or does it depend on other diseases and septicæmia? Or is it purely septicæmia? I must confess that I am a disciple of the first proposition. While the field is very extensive for discussion, I must be content by stating my main points for the hope that is within me. I believe that it has an essential origin as much as scarlatina, diphtheria, or typhoid fever. In this portion of Iowa, it never prevails to any alarming extent only at certain times in the year, and that is from January to the following May. In these months have our epidemics of puerperal fever prevailed. In those times in the year when the system has to bear up under the greatest climatic changes. In other words, it is the sickly season of the year. This is the time that puerperal fever prevails. We have then our pneumonia, typhoid fever, erysipelas, intermittent, remittent, and pernicious fevers. When this latter fever prevails (and it has only once since I have been a citizen of the State), then we had our greatest epidemic of puerperal fever. But every year we have

during these months more or less cases. Then, when the system is the better prepared to take on these congestive diseases, puerperal fever is most malignant. My experience in this country has extended to twenty-five cases, recorded, and my observations have satisfied me that it is a distinct disease in its origin. What is our proof? In the spring of 1874 I was called to treat a family, four of whom were down with erysipelas. On the fifth day of the disease, the mother of the family was taken in labor, and in a few hours was delivered of a fine, healthy boy. They were all confined in the same room together—a log-house 15 by 15. The mother recuperated well until the fifth day, when she had a chill, and on the following day facial erysipelas made its appearance, ran its course, and the woman recovered promptly. Six days after the mother took the erysipelas, the infant took it and died. Indeed, it was a house epidemic.

I have five other cases recorded of a similar character where the puerpera recovered without any symptoms of puerperal fever. Had puerperal fever been present, it would probably have been modified by erysipelas, but its specific poison was *not* present, therefore erysipelas ran its natural course and the women all recovered. I have had a few cases where I have thought that it might be possible that erysipelas was connected, but I have had more cases where the puerperal woman has had erysipelas without puerperal fever than with it.

The next evidence is in reference to malarial influences. I have on record twenty marked cases of intermittent fever which occurred during the lying-in state. All yielded promptly to treatment by the use of quinine. Again, in a number of instances have I had cases of puerperal fever modified by malaria, so much so, that I have thought at times that malaria might be the true cause; but when this fog would clear away and malaria would appear in its true light, I was led to exclaim the specific origin is not there. In the West there is scarcely an acute disease which runs its typical course without being more or less complicated with malaria. Then we must look on *this* as one of the peculiar influences fanning the flame in puerperal fever, but it can not be the cause of the disease. Just as

malaria complicates typhoid fever, which has originated the name typho-malarial fever, when at the same time typhoid fever has the same specific cause the world over. Then malaria is one of our greatest enemies to be feared in the puerperal state when puerperal fever is prevailing.

The pernicious form of malarial fever prevailed to an alarming extent among the male population during our recent epidemic of puerperal fever. Then, gentlemen, we can not escape the conclusion that every parturient female must have been equally liable to the same influence; but at the same time I was called to a number of parturient patients who had this pernicious form of fever, and not a characteristic symptom of puerperal fever. Then again has proven to me that puerperal fever depends upon its own specific cause for its existence, but by the complication of malaria the disease assumes a very malignant form. Then we shall still hold that it is the same with this disease as with many others, "that a given kind of disease is solely due to a given kind of morbid agent or cause."

There are many theories advanced in reference to the causation of this disease to which I would like to refer, but I shall be content by referring to but few.

The theory now advanced is that the sole cause of puerperal fever is bacteria coming in contact with the waste tissue and fluids of the body of the parturient state, working into the lymphatics, passing into the peritoneal fluid, their fertile home, and there developing this formidable disease. The gravity of the lesion depending on the multiplication of these micrococci, I am led to believe that this little world is the result of inflammation and the putrid excretions. The microscopists in these think they have found the sole cause of a number of our infectious diseases. They say this of diphtheria, anthrax of man and animals, milk-sickness, and certain puerperal fevers. This is a fact; all putrid animal matter contains bacteria, and just in proportion to the decomposition do we find bacteria exhibiting life or motion. Then it would follow that the excretions of all puerperal women would contain more or less bacteria, which, to my mind, is undoubtedly true. Should the physiological action of the parturient state be perfect, I believe she would pass on to recovery

without an untoward symptom, notwithstanding the presence of bacteria. These bacteria being found in putrid matter from the living, as well as from the dead, I can not quite understand why so many diseases of a different pathological nature can be developed from the same little mite, and still many other cases attended with these recover without a pathological change wrought by them. Do they not simply owe their entire existence to putrid animal matter? But what conditions do we find women in that contribute the most to this disease? In Iowa, the winter and spring months always manifest the greatest extremes; a very changeable climate from extreme cold to warm. The system becomes weakened and depressed, favoring congestive forms of fever, more especially of the malarial type, which is so prevalent in this country. All these influences tend to weaken and impoverish the system and favor puerperal fever.

Protracted labors which exhaust the uterine energy, preventing involution, exhaustive flooding, all favor the development of the disease.

As to its communicability from one patient to another, this has never occurred to me. I have treated erysipelas in its most malignant form and immediately left the patient and gone to the lying-in room and waited on the parturient female without any ill results following, the women making as rapid recoveries as under the most favorable circumstances. One may ask, does not erysipelas prevail during those months of the year when we find puerperal fever prevailing? Certainly it does; but not any more so than in the seasons when we have but few cases of puerperal fever. In a country practice we do not find disease as we would in a hospital practice. For the most part our cases are isolated, with pure air, pure water, and no impure exhalations from neighboring patients, already undergoing decomposition, no impure water filtered through the offal of thousands of inhabitants crowded up together, to make the disease more loathsome and fatal, but here we see it without these potent factors in its true form. Hence the infectious nature of erysipelas in puerperal fever is not so great. I do not remember of ever seeing or hearing of a case in this country that was caused by the infection being communicated from person to

person in the lying-in state. But the physician should not become careless and neglect his responsible duties in reference to strict disinfection during these epidemics.

In epidemics where the disease is very malignant, I believe such a thing can occur as communicating the infection from person to person, that the ichorous discharges from the vagina of a female suffering from puerperal fever coming in contact with a cut or an abrasion will produce fatal inflammation. We can have this form of inflammation from other ichorous discharges, known as surgical fever, which very much resembles puerperal fever. Again, we may say that septicæmia is the sole cause. This certainly must be regarded as a complication rather than a cause. There is always something prior to this for uterine involution is not checked, as a rule, until inflammation is established, and sometimes it is not then, the lochia continuing throughout the course of the disease, but as a rule these excretions cease until the disease changes for the better. But as to woman being her own poison, this is not just so clear to me. On referring to my diary, I find a number of cases recorded where the lochia ceased on the second and third days after delivery and involution ceased. These cases remained, generally, in this condition until the fifth and sixth day, one until the seventh. The cases then improved without anything occurring unusual. Some had a slight pyrexia, with headache, etc., but nothing alarming occurred in a single case. Any of you, on reflection, can call up cases of the kind. I have a case on hand at present where the lochia became suppressed on the third day after delivery; it has been five weeks since it occcurred. She has been without fever the whole time, and the only feature in the case is mental depression, but she is now recovering from that.

If woman's parturient excretions are so poisonous to her, why did not some of these patients have puerperal fever or septicæmia? One author says that the fundus of the womb resembles an amputated stump, but there is considerable difference between a physiological process and a pathological one. The stump is pathological, and the womb is physiological. Then I believe it has a spontaneous origin, its cause being entirely dis-

tinct from other diseases; but that it is complicated or modified by other diseases, is beyond a question of a doubt in my mind. The post-mortem appearances do not always indicate the gravity of the disease by the nature of the lesions; hence so many divisions of the disease are arbitrary and useless. Then it would follow that the specific nature of the disease would demand a specific treatment, but how far are we from this attainment in the specific nature of other diseases? We, therefore, can only treat puerperal fever in the main, symptomatically being guided by the indications in the various types of the disease and its complications. Much can be done by the use of prophylactics. During epidemics of this disease, women become very much alarmed, especially if they are pregnant. In every case where the physician becomes satisfied or suspects a tendency to this disease by a predisposition of the pregnant female, he should at once institute a treatment to best prepare her system for the accouchement and the puerperal state that follows. Mild laxatives, such as castor oil, should be taken every two or three days for a week before confinement, also tonic doses of quinine. The mental depression that follows the alarm should be as much guarded against as anything else. Finding a woman in this condition, she should at once be removed beyond the epidemic region. In nearly every instance she is sure to have an attack of the disease. After confinement, strict cleanliness should be observed; all soiled linen should be removed and disinfectants used in and around the bed; vaginal antiseptics should be frequently used to prevent the formation of poisonous excretions. It is with these excretions, as is represented by Schrœder in ovariotomy, the lochia after confinement, "is not in itself the cause of septicæmia, but is, on the contrary, perfectly harmless, unless it decomposes; but that decomposition only occurs after infection, and that consequently the important point is the avoidance of infection."

In my therapeutics, I presume I will offer nothing new, but have long ago come to the conclusion that in the treatment of any disease, success did not just depend upon the peculiar selection of the drug, but that on the size of the dose, the time of administration to meet the peculiar idiosyncrasy of each indi-

vidual patient, depended the result. So it is with puerperal fever, each peculiar type of the disease must be met with appropriate remedies in such doses as each singularity of constitution demands, and also the gravity of the disease in each case. Then what are our remedies? The principal ones on which I rely are mercury, castor oil, opium, bismuth, quinine, and aconite. My topical applications are turpentine stupes, fomentations, poultices, and laudanum. My vaginal antiseptics are carbolic acid, Labarraque's solution, and bromo-chloralum. The first thing in the treatment is to unload the bowels with a mild cathartic, if the patient has not already a diarrhœa, which, in a large majority of cases they do very early, which is immediately followed by the characteristic vomit, which rapidly increases as the disease progresses. Many cases can be aborted, or run an abortive course by giving early in the formative stage a large dose of quinine and opium—ten grains quinine and two grains opium, with tinc. aconite in full doses. By a repetition of these medicines every hour until several doses are given, the disease yields readily in many cases; but if the disease has been seen at a late hour, when it is fully formed, I believe that quinine is injurious. Experience teaches me that such is the case. When the patient has thus been seen at a late hour, then we must resort to large doses of opium and sub. nit. bismuth to control the paroxysmal pain and the distressing nausea and vomiting. If these fail, or are not retained, then resort to the hypodermic syringe; use morphia until the pain is subdued. These conditions soon jeopardize the life of the patient, and all hopes are gone as far as medication is concerned. We find no remedy so much indicated at this time as opium. Nothing contributes so much to the comfort of the patient as to have these pains relieved and the distressing vomiting. It not only puts the parts at rest, but the extreme anxiety of the patient is controlled, and then quiet sleep takes its place. While having to rely on opium so much in these cases, I would not lock up the system so that there could not be procured one or two operations from the bowels a day, but this will most always occur, notwithstanding the influence of large doses of opium, which, I repeat, must be used to control the pain. We

must not forget that our patient's blood is poisoned with some specific influence, and as a result of inflammation, rapidly becoming so by septic influences; hence, we must keep up elimination. The use of quinine early controls the malarial influence and has an antipyretic influence over the system. Frequently after a very few doses are given a marked change can be observed; the temperature would come down, the pulse become soft and less frequent, the pain yield and the patient become moist and comfortable.

Quinine has other influences in this disease, its marked influence over the vasomotor system, controls the leucocytes, gives tonicity to the capillary blood vessels, and tends to a normal circulation. "The amœboid movement" of white corpuscles would be prevented, the blood vessel walls would become normal. Hence the stomata would not admit of the migration of the leucocytes. Quinine, then, in this way arrests the essentials of inflammation. Then it is very important that quinine should be administered, if at all, very early in the disease. Aconite is a favorite remedy of mine. It is a remedy that I use in the inflammatory state, "with sthenic reäction, when the pulsations of the heart are strong, the arterial tension high, and the muscular power unimpaired." It produces a decline in the body-heat, and produces perspiration. In the language of a recent writer: "The utility of aconite as a remedy in inflammation is not limited to its antipyretic action. Aconite powerfully affects the skin and kidneys, increases the elimination through these emunctories, and thus disposes of the waste products of inflammation. Aconite suspends activity of the motor and sensory centres of the spinal cord, and destroys the contractility of the cardiac muscles." Whenever I discover that the heart begins to flag, I suspend aconite at once, because many cases of this disease die from cardiac insufficiency. This is why we fail with this remedy and others of a kindred character, for the disease is working the same results on the system that we are obtaining by the continued use of these remedies. Bloodletting is far safer than the continued use of these remedies. Then we should look out and not have our patient paralyzed before we are ready for such a calamity. I may illustrate better, perhaps,

by reporting a few cases of different types of the disease and my plan of treatment:

Case I.—Mrs. H., aged 28; primipara, sanguine temperament; was called to see her November 30th, 1875. She had been confined November 26th. Three days after had a chill, followed with high fever, great tenderness over the abdomen, tympanitis, intense paroxysmal pains and a diarrhœa, also attended with the characteristic nausea and vomiting. Suppressed lochia; pulse 130 per minute and full; temperature 104° F.; dry tongue, with great thirst and restlessness. She manifested great anxiety in reference to surrounding objects, but little concern about herself. The day after confinement the family had given her a cathartic dose of castor oil, which was followed by a diarrhœa. Gave her at once one grain of opium pulv., and five grains of subnitrate bismuth with three drops tr. aconite. Left her twelve such powders, one to be given every second hour until I returned, but to use the aconite every fourth hour. Ordered turpentine stupes, followed by emollient poultices.

December 1st.—My second visit found things pretty much the same, the disease making but little progress. Continued the same medicine with the exception of aconite. Doubled the dose of opium and gave it every hour. Ordered antiseptic injections of carbolic acid every fourth hour.

December 2nd.—The patient improved. Relieved of the nausea and vomiting and the paroxysmal pains. Less tenderness over the abdomen; pulse 115; temperature 120° F. Bowels moved twice in the twenty-four hours. Slept a little by spells during the time. Prescribed the same remedies internally to be used every third hour. Disinfectants used in and around the bed. Had removed all soiled linen and thoroughly disinfected. Kept up the vaginal injections with the persistent use of the topical applications.

December 3d.—The patient steadily improving under this treatment. Continued, principally, the same course until my eighth visit; only lengthened the time to give the medicine. Left the patient in the hands of the nurse until she was restored to health. I regarded this case as being one of puerperal fever

without any complications. My object was to check the nausea and vomiting and subdue the pain as promptly as possible and prevent the development of infection. I used 48 grains of opium in 24 hours without producing narcotism, but a calming influence over the patient relieved the pain. I did not use quinine in this case, for the results were most gratifying, and I saw no indication. My next case was different.

CASE II.—Mrs. R., aged 38; her tenth child; was taken in labor January 2d, 1876. After a few hours of labor a child was born. Three days after was called to see her in great haste. She had had a chill and was complaining of severe paroxysmal pains, nausea and vomiting, great tenderness over the abdomen with tympanitis. She had a diarrhœa; in short, she had all the symptoms of puerperal fever. Knowing her previous history, I suspected a complication of malaria. Administered at once ten grains of quinine, one grain of opium with five drops of tr. aconite. This to be followed every second hour by the same size dose until four doses were taken, then to be used every fourth or sixth hour, depending upon the distressing influence of the quinine on the head if any arose. Used turpentine stupes and emollients. My second visit found the patient improved very much. The pains were less, the abdomen not so tender, the pulse had come down, and the patient was moist. The temperature was but little above normal. Continued this treatment up to the fourth visit. Discharged the patient convalescent. With this case the disease ran an abortive course, which illustrates a certain class of cases that always occur during the prevalence of this disease, and many of them prove fatal in a very short time if not well guarded. Seeing the good results of quinine in a few cases in my first experience, I began to think it might do in all cases, but I soon learned that it would not, which the following case illustrates.

CASE III.—Mrs. S., aged 21; primipara; nervous temperament. Was called to see her March 12th, 1874. Second day after delivery she took a chill. Had a full bounding pulse, 120 per minute; temperature 104° F. Tympanitic with severe pain, nausea and vomiting; tongue coated and dry; wandering of the mind. Gave her five grains of quinine, one grain of

opium and three drops of aconite every third hour. Topical application as used above. This patient had previously taken a cathartic which had operated freely, so reported by the family, but it did not leave her with the characteristic diarrhœa. This treatment was continued until my second visit.

March 13*th.*—Pulse 130; temperature 104½°; tongue heavily coated; great tenderness over the abdomen; pain intense, with the black vomit; the patient was very restless, with a very anxious expression of the countenance. Gave her the following: 24 grains of calomel, 12 grains of opium; to be divided into 12 powders, one to be given every second hour until all were used, then to be followed with a cathartic dose of castor oil. Ordered the continued use of the topical applications and antiseptic injections per vaginam.

March 14*th.*—The patient improved. Her bowels had moved a number of times. Pulse 115; temperature 102° F. A slight moisture began to make its appearance; pain and tenderness less, and not so tympanitic; passed urine in greater quantities than previously. Prescribed 15 grains of opium, subnitrate bismuth two scruples, divided into eight powders, one to be given every third hour, with fomentations to the abdomen, and antiseptic injections per vaginam.

March 15*th.*—Less pain and tenderness over the abdomen; pulse 105; temperature 101°; vomiting checked; bowels moved four times; respiration good; urine passed in sufficient quantities. Ordered about the same treatment from day to day. On the ninth visit discharged the patient as being out of danger. There is another class of cases following puerperal eclampsia which always prove fatal unless the patient is thoroughly blooded in the eclamptic state. Aside from these cases I think bloodletting is rarely ever indicated. All the above cases have recovered, but this has not always been my experience. I have withheld the cases that have terminated fatally, from the fact that negative results always follow medication in such cases. I would be pleased to give my reasons for each step in the treatment of those cases above reported, but this paper is already too lengthy. I will let each one draw his own conclusions from the points hinted at in this paper. I have been exceedingly fortunate in my small list of mortality.

The main features in the disease seem to indicate that the pain should be relieved, the nausea and vomiting checked, and complications treated with appropriate remedies, and, above all, keep up elimination, for without this *last* we *must* fail.

In conclusion, I hope to be able in the future to continue the study of this much dreaded disease if opportunities continue to present themselves as they have in the past. Now, gentlemen, my chief object has been to relate my own experience with this disease, to describe how I have observed it influenced by remedies as briefly as I could, and what I have thought about the nature of its causation. If my observations have been different from others, I must say that I have related them with as much accuracy as I could. As to my reasonings, I will let them take their chances.

ART. III.—*A Note of Warning—Lessons to be Learned from the Cholera Facts of the past Year, and from Recent Cholera Literature.* By ELY MCCLELLAN, M. D., Surgeon United States Army.

During the past eighteen months, the English, Indian and Continental sanitary observers have recorded outbreaks of cholera, Asiatic, in various portions of India and Turkey in Asia. Such records have their significance as indicating the gradual approach of cholera (A.)* to Europe. As such they are accepted by European sanitarians, and it is time that American authorities should shake off the lethargy which in former years has permitted this disease to enter and to devastate this continent, and by the judicious employment of those methods which science has placed within their grasp to prohibit the importation of the disease.

The time has surely come when American physicians should carefully study the innumerable facts which have been gathered of the movements of this fatal disease throughout the world, to

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* Cholera Asiatica.

base their *theories** upon these facts and not upon *hypotheses*† which they may have been taught. It is therefore proposed in this article to gather together all the cholera notes which have appeared during the years 1875 and 1876, and to present them with some notice of recent cholera literature and remarks upon the great truths therein contained, for the consideration of such professional men as may be interested in this study.

CHOLERA ASIATICA IN SYRIA.

Early in 1875 cholera (A.) was reported to have become epidemic in Syria, and Dr. George E. Post,‡ surgeon to Saint John's Hospital at Beirût, reports such facts as could at the time be gathered as to the epidemic.

"The disease first developed at Hamath, a Turkish town of some 50,000 or 60,000 inhabitants, in the person of an Albanian recruit, some 500 of whom had recently been received at the garrison. These recruits are reported as being in bad sanitary condition at the time of their arrival, but there was nothing to excite suspicion that any of them had been exposed to cholera (A.) infection.

"On the 22d of March a case of cholera (A.) occurred in the person of one of these recruits, and it was soon followed by 15 others in the garrison; of these 16 cases, 15 proved fatal. From the foci thus established at the barracks the disease spread to the town.

"From Hamath a detachment of troops were sent to Damascus. They carried the disease with them, and soon all the

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* A true theory is a legitimate deduction from many facts, not contradicted by equally numerous and equally well attested facts. *An hypothesis is an idea or supposition or conjecture, which* remains to be proven.—*Peters.*

A theory is founded on inferences drawn from principles which have been established by evidence.—*Fleming.*

† An hypothesis is a guess or supposition made concerning the cause of some particular fact, with the view of trying experiments or making observations to discover the truth. A theory is a complete system of suppositions *put together for the purpose of explaining all the facts that* belong to one science.—*Taylor.*

‡ Lancet, London Edition, August 28, 1875. Dr. Post is the distinguished son of Dr. Alfred C. Post, of New York City.

villages along the line of march were infected. Early in June the disease developed in Damascus, a panic occurred. The inhabitants scattered in all directions, and carried the disease to Lebanon and anti-Lebanon, points which had in other epidemics proved safe asylums from its ravages. July 5th a woman of Damascus arrived by Diligence at Beirût. Two days after her arrival she died of cholera. This case and probably others which followed, established 'foci' of infection at that town, but the disease did not become epidemic until seven days after the first case had died."

As yet but fragmentary notes of this epidemic are at our command. We quote from the "Lancet" and the "Medical Times and Gazette.* From these journals we learn that the Syrian authorities were at first disinclined to acknowledge that the disease at Hamath was cholera (A.), and it was not until the disease had become virulently epidemic that any steps were taken to investigate the outbreak and the condition of the suffering communities. Such, unfortunately, is the early history of almost all epidemic diseases of a virulent character. Local authorities almost invariably attempt to cover up the existence of infectious diseases, in the vain hope that by so doing the financial prosperity of the infected locality may not be disturbed. Such events have but lately transpired upon our own shores. It was known for some time that yellow fever was virulently epidemic at the Havana. Vessels with passengers, crew and cargo, were constantly arriving at ports of the United States, and one morning a case suspiciously like that disease occurred in the city of Savannah. Prior to the occurrence of this case, one or more infected vessels had arrived at that port. The first case was rapidly followed by others, the mortality each day increased, and still the very existence of the disease was held *as a state secret.* Finally the explosion occurred, the fact could no longer be concealed, the infliction spread over the city. Those of the inhabitants who possessed the requisite means left the place, and the daily telegraphic reports announced the death of many refugees, some as far north as New York city. Had the

* The London editions of both journals alone used.

importation been cholera in place of yellow fever, many points of infection would have been established, and by this time an epidemic would have been established.

To return to the Syrian outbreak. On the 24th of July it was reported that Dr. Dillon, the resident sanitary officer of the Turkish government at Mossul, had been sent to Hamath; but, unfortunately, on the fourth day after his arrival he was taken with cholera (A.) and died. August 14th it was reported that Antioch, Salahich, Deir Ali, were infected, and that the disease had become epidemic among the Druses. September 18th the disease was reported at Aleppo, Tripoli, Beyroût, Lattakia and Sienket Haibe in the Lebanon. October 30th it was stated that cholera (A.) had greatly abated in Syria, but on the 18th of December it was prevalent at Kirsada and Insi Mossul.

With these notes the record of the Syrian outbreak closes. A commission of experts are, however, upon the ground; all events will be thoroughly sifted and subjected to a rigid examination, when it will undoubtedly be found that this demonstration of the disease has in no way departed from those already on record.

A leading article in the "New York Times" upon this subject is of interest, as throwing some light upon the circumstantial evidence which already surrounds this demonstration:

"No great Asiatic pestilence has ever scourged the East or Levant and allowed Damascus to escape. At least two great caravans, the pilgrimage of Hadjis from Bagdad and the great commercial caravan from the same region, have for centuries made the plain of Demeshk-i-shem their terminus, and these caravans carry pestilence in their train under any and every quarantine which European skill can devise and Turkish administration execute or attempt to execute. It was by this ready path that the plague entered Palestine when the troops of the French Directory occupied it, and entered it again under Napoleon's sedulous imitator Ibrahim Pasha, thirty years later. The great commercial caravan this year (1875) would have reached Damascus, in the usual course of events, shortly before the breaking out of the cholera whose devastation is just announced, and it will not be surprising if later advices prove the

caravan to have been its source, as present news places its beginning on the caravan route."

Hamath is north of Damascus a little over one hundred miles, but is upon the great route of travel to and from that city. It is as yet impossible to account in detail for this outbreak of cholera, although the route by which the infection would probably again reach the eastern shores of the Mediterranean and Russia was last year indicated by Dr. Peters.*

Although from Hamath the spread of the disease (from the foci therein established) over Syria is clearly demonstrated, Dr. Post rather inclines to the belief that it was an *endemic outbreak*. The untimely death of Dr. Dillon will probably prove an obstacle to the development of the initial facts of this demonstration, but developed they will surely be, possibly before these pages issue from the press.

It is, however, perfectly allowable for us to judge this outbreak by the history of former epidemics, and a recent communication of Dr. James McCraith,† Surgeon to the British Seamen's Hospital of Smyrna, entitled "*How the cholera got into Salonica and was carried out again without accident*," is certainly suggestive as regards this outbreak.

"Salonica is a walled Turkish town, open only at the sea entrance. At this town during each epidemic of cholera, the surveillance exercised is said to be extreme. In 1865 the quarantine establishment of the city was removed to a long distance on the coast, and at this establishment some fifty or sixty fatal cases of the disease occurred.

"During the height of the disease at the quarantine, the inhabitants of Salonica were startled to learn that cholera (A.) had occurred at a small village but one hour's distant, with which the city was in free pratique, and that several cases had proved fatal. Immediate investigation followed, and it was proven that the head of the family in which the disease had first occurred had a few days previously visited Salonica to purchase supplies; that while in the city he had purchased a

* Cholera epidemic of 1873 in the United States, p. 689.

† Medical Times and Gazette, December 11, 1875.

'*grego*' or great coat, made of goats' hair, from a man who had been employed at the quarantine, but who by some means had gotten into the city; and it was positively determined that this coat had belonged to a man who had died of cholera (A.) at the quarantine."

Dr. McCraith remarks, that Salonica was saved from the disease by the merest accident, for had the *grego* been sold in the Jew quarter of the city, an epidemic undoubtedly would have been developed.

CHOLERA IN INDIA.

Immediately preceding this outbreak in Syria, there had been no unusual activity of cholera (A.) in India. It must, however, be remembered that in certain portions of the Indian Empire (the Presidencies of Bengal, Bombay, and Madras, and notably only those portions of these Presidencies that lie upon the coast) the disease is *endemic;* that each year there are two or more outbreaks of the disease. The hill country is comparatively exempt from the disease; yet to this, in these later years, there have been marked exceptions, as will be hereafter shown. That the disease was by no means quiet, however, is shown by the report of Dr. Henry King,* the Acting Sanitary Commissioner with the Government at Madras. This report shows that in a population of rather more than 31,250,000 inhabitants there were, in 1875, 87,943 cholera deaths.

The Indian reports for the period of which we are treating also indicate a startling advance of the disease. The hill stations, the Sanitaria, can no longer be considered as health resorts, and this not from any fault of their location, but simply from the indifference of the local authorities, who have permitted, year after year, the simplest sanitary laws to be disregarded. It would seem as if these same authorities had been determined to demonstrate, beyond a peradventure, the *truth* that cholera (A.) can be carried wherever man may wander; and that the disease may be propagated in any locality, no matter how far removed it might be from *malarial* or *telluric influences.*

* Medical Times and Gazette, March 25, 1876.

Simla, the summer seat of the Government of India, is located in the Himalayas, to the north of Hurdwar, upon the northern borders of the Punjab, at an elevation of 7,000 feet above the sea, and distant from Calcutta over a thousand miles of travel. It is acknowledged to be the most beautiful hill sanitarium in the world. It formerly consisted of but Peterhooff, the summer residence of the Viceroy, the establishments of other officials and their dependants; but it would now appear as if the sanitary authorities were satisfied "with the pureness of the mountain air as a safeguard against the diseases of the plains; for on the face of every hill houses are piled one above the other from the bottom to the top, and thus the drainage from the uppermost houses saturates and poisons the soil around those below them. In the very centre of the station, in the worst possible site that could have been selected for it, is placed a foul and crowded native bazaar. The principal thoroughfare leads through this bazaar, and every one passing along it is exposed to the malarious vapors which such a locality must needs generate."*

Since 1865 cholera (A.) has almost yearly appeared at Simla in a deadly form, and it must be accepted as a very strong argument that the disease will occur and develop its virulent power wherever it may be carried by human agencies, and wherever it finds, when so conveyed, a suitable nidus. Further evidence that this sanitarium has been destroyed by human agencies alone is found in the report of the Sanitary Commissioner with the Government for India in 1865.†

"The sides of the hills were everywhere studded with human excrement, and the smell which arose in every direction was a disgrace to a place which professes to be an asylum for the sick; the water was contaminated. In summer the dry beds of the mountain torrents are places of convenience and filth. The edge of the hill, at a few yards distant from the public road, was lined with filth, and was evidently the resort of the numerous native servants of the locality. At some distance lower down

* Medical Times and Gazette, Nov. 6, 1875.

† Proceedings of Sanitary Conference of Bengal, 1875.

the slope is the spring from which the water supply of the summer residence of the Viceroy and many of the largest and best English houses in the vicinity is drawn. What must occur after every rainfall is but too obvious."*

The "Medical Times and Gazette" of October 23, 1875, notes the fact that the Sanitary Commissioner has advised the abandonment of Simla for the next three years, and the removal of the summer seat of Government to Raneekhet.

At the same date that the outbreak of cholera (A.) of 1875 was reported at Simla, the disease had become epidemic at Kuscuolie, the latter also a sanitarium. This is a point of interest to cholera students, as it is the locality at which Pringle† was able to determine the way in which the Cordon-de-Santé had been broken in 1872 and the station infected by cholera. Pringle traced the epidemic of that year to a cow-feeder who returned to the sanitarium after a visit to some infected villages upon the plains.

October 2, 1875, cholera (A.) was reported to have broken out amongst the European garrison at Delhi.

May 15, 1876, the disease was reported to be spreading through Cashmere.

August 5, 1876, cholera (A.) is again reported at Simla and at Darjuling and Murree.

It will be observed that the reports we have noted relate to the "up country" stations of India. No note is made of the violent outbreaks of the disease near the coast, especially those in the Presidency of Bombay, although they are the undoubted starting points of these epidemics. Persia and the remaining Asiatic States remain to be heard from, when the advance of a new epidemic for the nations of the western world may be announced, and its progress, step by step, may be mapped out.

Without further comment upon these facts, we pass to the consideration of certain valuable additions to cholera literature which have been issued during the present year. The works to which we refer are from the hands of gentlemen whose names

* Macnamara, Treatise on Cholera, p. 262. Macnamara, History of Cholera, p. 397.

† Edinburgh Medical Journal, Sept., 1874, p. 231.

are familiar to all students of the disease, and who are received as authorities upon this subject by the vast majority of readers.

I. *Reports of the Medical Officer of the Privy Council and Local Government Board. New Series, No. V. Papers Concerning the European Relations of Asiatic Cholera, Submitted to the Local Government Board in Supplement to the Annual Report of the Present Year. London.* 1875.

II. *A History of Asiatic Cholera, by C. Macnamara, F. C. U., Surgeon to the Westminster Hospital. London. Macmillan & Co.* 1876. 8*vo., pp.* 466.

III. *Cholera Epidemics in East Africa; an Account of the Several Diffusions of the Disease in that Country from* 1821 *till* 1873, *with an Outline of the Geography, Ethnology, and Trade Connections of the Regions through which the Epidemics passed. By James Christie, A. M., M. D., late Physician to the Sultan of Zanzibar. London. Macmillan & Co.* 1876. 8*vo., pp.* 508.

The first volume which we notice is the last of that most valuable series of reports on Public Health, published under the supervision of Mr. John Simon, who has been for many years, as is known to all, the Medical Officer of the Privy Council.

The attention of the sanitary authorities of Great Britain having been turned to the examination of the two last cholera (A.) epidemics in Europe, the task of collecting and of presenting the evidence obtained was assigned to Mr. Netten Radcliffe, who is known as a careful and accurate sanitary observer, who has especially interested himself in the study of cholera (A). As to the manner in which this task has been performed, we can but quote the introductory remarks of Mr. Simon:

"All the facts point to a single conclusion as to the spread of the disease—namely, that human intercourse is the single active factor in diffusing the infection. Detailed observation of particular outbreaks of cholera and suggestions of analogy and experiment have long led European pathologists to believe that the disease possesses great, though peculiar, power of spreading from the sick to the healthy; and Mr. Radcliffe in his very wide epidemiological study finds no reason to impute to cholera (outside of India) any other mode of origination and extension than such as that doctrine expresses."

Sanitary students have long been under obligations to Mr. Radcliffe for original experiments, plainly expressed opinions, and invaluable suggestions. To him we are indebted for the first steps which led to the observations from which the work, third upon our list, was formed.

Radcliffe, in 1865, directed attention to the occurrence of cholera (A.) upon the slave dhows running north and captured off the coast of East Africa previous to the cholera (A.) appearing in the Hedjaz, and he suggested that the disease must have existed in East Africa at that period. This prediction has now become a fact. In this report Mr. Radcliffe has adopted the form of a narrative of facts, and these facts all point but to a single conclusion as to the spread of the disease, and that *is that human intercourse is the single active factor in diffusing the infection.*

As regards the question of quarantine, which has for years been a vexation to sanitarians, Mr. Simon, in consideration of all earlier data, and the later facts presented by Mr. Radcliffe, remarks:

"That a quarantine of a sort to be trusted in as a national defence is not conceivable, except in proportion as a people live apart from the great highways of commerce, or are ready and able to treat their commerce as a subordinate political interest; that though undoubtedly quarantine planned with the precision of a scientific experiment and conducted with extreme rigor, may keep cholera out of places (such as remote islands) where the extremely difficult conditions can be completely fulfilled, yet, under other circumstances, quarantine can not reasonably be expected so to succeed, and must be regarded as a mere irrational derangement of commerce. Seeing that cholera is diffused in all directions by means of constantly moving streams of religious pilgrimage and commercial enterprise, the first condition of treating a contagion so distributed would be to 'immobilize' at discretion the great tides of human intercourse; a manifestly impossible project."

Later, he writes: "It can not, I think, reasonably be doubted but that, as conditions of filth, and especially as filthy conditions of water supply are the main facilitating conditions for the

dissemination of cholera in Europe, so they must be immensely potent influences in favoring the advance of cholera from station to station in successive epidemic outbreaks in the countries which lie between India and Europe; and it would seem certain that, along the whole succession of lands which transmit the streams of westward traffic from India, common hygienic vigilance in respect to those conditions may be of very great effect in impeding the diffusion of cholera."

Macnamara, for many years was Surgeon to the Calcutta Ophthalmic Hospital, and during the entire period of his residence in India was a most enthusiastic cholera student. In 1870 he published a treatise on Asiatic Cholera; a work noted for the clearness of the testimony offered and for the boldness with which his deductions were advanced and defended. He is known as an exponent of that *thoroughly practical theory* which claims that cholera (A.) is a disease of human beings, which is carried from place to place *"through a continuous chain of individuals affected with the disease or through articles stained with their dejecta."* This theory, which has enlisted the entire sympathy of the most distinguished cholera observers of the world, offers (should its premises prove to be true) the only means of escape which communities exposed to the infection of the disease may avail themselves of.

For should the disease be conveyed by an epidemic wave of some mysterious oscillating material which is influenced by telluric or meteorological disturbances, what steps may be taken against it? Or, should the disease originate in that wonderful atom termed malaria, supported by local influences, such as filth, etc., the only remedy to be found is in the herculean task of removing from the face of the earth all decomposing matter which may engender malaria.

Upon either proposition it is fruitless for communities to hope that they may guard themselves. Better than indulge in so vain an effort whenever cholera occurs, they should adopt the legend of the dark ages and write upon their walls "the visitation of God." Fortunately, we are not called to bow to such blind theory and to submit to be led to the slaughter. The same mighty power that let loose this dread disease has also

appointed the way of escape. By exercising the intellectual powers which they received from their creator, Snow, Farr, Simon, Budd, Peters, Macnamara and others have elaborated this *practical theory*, supported by an indisputable array of facts, and this theory places in the hands of all communities the means of guarding against the disease.

Cholera (A.) is not a contagious disease, per se, but when the excreta of a person suffering from the disease have reached a certain stage of decomposition (or, as a late writer put it, of development) it becomes infectious and is capable of reproducing the disease, is the argument which is advanced, and to prevent the excreta of such cases reaching this stage is the remedy offered.

Within the compass of Macnamara's work will be found a comprehensive, but of necessity condensed, narrative of the travels of cholera (A.) from the times of Vasco di Gama to the present. Such an array of truths are presented as must convince the most skeptical, provided they will allow the immensity of the facts, gathered from the entire range of cholera history of all nations, to drive from their minds some isolated instances of individual experience in their native villages, which have hitherto obscured all else from their eyes.

It is very true that in detail Macnamara has been telling again the same old story, and that perchance it may not have been told in any more appealing style than that adopted by others, yet the *facts* not *theories* advanced will be forever duplicated by cholera (A.) epidemics, and each outbreak will more clearly demonstrate the assertion *that no epidemic of cholera (A.) has ever occurred in Asia, Europe, Africa or America, without leaving a broad trail, by means of which it may be traced back to its point of eruption in British India.*

We are accustomed to hear it stated in this country that the government of India has produced the best practical workings the world has ever known. Nothing can be more fallacious than this statement; and *that* which has been hinted at by former authors is by Macnamara most strenuously insisted upon. It is a surety patent to all fair-minded students that cholera (A.) originates alone in India, and that the entire civilized world

has a right to demand that all necessary measures be taken by the government of that country to prevent the escape of the disease from their borders; and it is still more true that while under the auspices of this Indian Government much has been *written* upon sanitary improvements, little or nothing of a practical nature has been accomplished. Why so little has been accomplished, and why the Indian Government should be held to a strict accountability, will be obvious to all who make themselves familiar with the story as now told by Macnamara, and as it has been told again and again by Peters and others.

So long as the great religious festivals of the Hindoo are tolerated; so long as the death-rate of these unfortunates is annually as great as it is at present (for we read that at Puri, the site of the far-famed temple of Juggernaut, there are annually 12,000 cholera deaths, and as yet the government has attempted at this point no sanitary surveillance, as they have at Hurdwar, Allahabad and other points); so long as these unfortunate people are permitted to collect by the hundreds of thousands in lodging houses, the very description of which is sickening; so long as the priests are allowed to batten upon the sale of "holy food;" so long as these worshipers, worn out by the fatigues of travel, by debaucheries, and by bodily infirmities, are permitted to pursue their weary way along all thoroughfares, *so long* will cholera (A.) be conveyed from the holy cities to all portions of India and to all nations of the world.

At the present day it is surely madness to dispute the array of truths as presented in this the latest history of the disease, and to assert upon the strength of instances of insignificant value that the facts narrated can tend but to this broad truth. Strange as it is, there certainly are numbers of such misguided individuals, and conspicuously among them we find the name of the statistical officer of the Sanitary Commissioner with the government for India. The reports of this gentleman are based upon communications made to him by medical officers located throughout Bengal. It is a notorious fact, that of late years in Bengal little or no effort has been made to keep any record of the migrations of cholera, for it has long been assumed that the disease is only blown about by the winds, and therefore any inquiry into the track of an epidemic is useless.

This state of medical opinion undoubtedly results in great measure from the dogmatic assertions of this statistical officer, who found himself obliged to differ with his predecessors to insure his own notoriety, must perforce manufacture a theory, and having observed locusts borne by the wind 500 miles out at sea, concludes that cholera (A.) is an aerial something which can also be blown by the wind like the locust, a few dropping here and there, while huge swarms settle down in other places. It is most pitiable to notice in his reports such childish illustrations as the following: "I have often said that no palpable manifestation realized to my mind the idea of the diffusion of the impalpable agent, cholera, except a locust flight. At one time leaving not a trace behind, at another dropping individuals only from the locust cloud, at a third sending down powerful offshoots; the locust flight darkening the sky overhead, traverse the widest tracks until it alights, because it has struck against an aerial wall of obstruction."*

"The flight of locusts appear to have deposited their eggs, and the larvæ are described as covering the country.

"The locusts are out over almost all the entire country. They are now doing little harm, but great apprehensions are entertained for the result when the young crops are produced."†

It is evident from such remarks that Bryden infers that there are cholera eggs or germs as well as those of locusts. As cholera often travels against the strongest winds and has often been manifestly carried about by cholera patients, soiled cloths, etc., the germs of cholera must attach themselves to persons and clothes. Bryden's theory, when stripped of its false assumptions about aerial conveyance, unwittingly gives proof and force to the more correct theory of human conveyance.

It is very true that the task of tracing cases of cholera (A.) through Bengal in these later days is a task of gigantic proportions. The native population is immense, estimated at 100,000,000. The movements of pilgrims are so vast that no one knows how cholera (A.) enters the various cities, towns and villages,

* This aerial wall must be an opposing wind, but against opposing winds cholera often travels.

† Report on the general aspects of epidemic cholera in 1869, part 2, page 38.

for the natives exercise all their cunning to avoid falling into the hands of the English medical men. Add to these obstacles the apathy induced by a temperature of 90° to 105° in the European, and then, to all else, the reprehensible conduct of the statistical officer in obstinately contending for his theory, and it is easy to understand how all spirit of independent investigation is well nigh crushed out among the Bengal medical men, *and they can find nothing human in the diffusion of the disease.* It is unfair to say that this gentleman has been misled by the reports of his subordinates, for it may justly be charged *that he has misled the local medical men, not they him.*

The exposé made by Macnamara will undoubtedly bear good fruit, and if naught else is accomplished by his work, for this alone the world will remain his debtor.

Dr. James Christie, late physician to the Sultan of Zanzibar, has been known to the Profession as a cholera observer for some years. In 1870 and 1871 he published in the "Lancet"* papers upon cholera in East Africa, and having achieved a most signal success in collecting data, has given to the world a valuable work. It is certainly to his credit that in the wilds of Africa, surrounded by all the privations of life in Zanzibar, he has been able to track out the course of this disease better than it has been done in many more favored lands.

One of the most fortuitous results of this work is the public refutation which is made of the much-quoted statement of the Bengal statistical officer, *that the cholera which occurred upon the East coast of Africa, in Zanzibar in* 1869, *was blown over in a few days from India.*† It will be remembered that this statement was made in spite of the assertion of Dr. Kirk, of Zanzibar,‡ "that the epidemic had come from the *West* to the coast of Zanzibar," and it has long been known to students that this same Bengal officer suppressed the positive fact given by Kirk, *that the disease arrived by caravan from the Northwest.*

Christie demonstrates beyond a peradventure, that the Mecca cholera in 1865 had crossed the Red Sea at Suakem and Massuah in Nubia, traveled along the northern caravan route down

* Lancet for 1870 and 1871.

† General aspects of epidemic cholera in 1869. ‡ Ibid, page 38.

through Abyssinia and Ethiopia, and that the disease was epidemic upon this route from 1866 till 1869, when it reached Zanzibar from the *West* and not from *India on the East.* In making this statement, Christie modestly states "that this fact seems to have escaped Dr. Bryden's attention," but at the same time he asserts that the fact was distinctly stated in an official report sent to Bengal.* Kirk also repudiates utterly the statements of Dr. Bryden, and proves that the cholera reached Zanzibar only by propagation along the line of human travel, and that it was several years in reaching Zanzibar from Mecca.†

It would be quite unfair to make these statements without presenting in detail the proof.

The first report of Dr. Kirk, dated November 25, 1869, states, "it is now more than a month since the first rumors reached us of the approach of cholera from *the West.*"‡

Dr. Bryden suppressed part of Kirk's second official report, which was dated February 6, 1870, in which he states a fact which Christie§ writes was well known to every one in Zanzibar: "Cholera came to us by the Masai, or northern caravan route." Christie says this seems to have escaped Dr. Bryden's notice, for the statement is distinctly made that the epidemic came to the coast from the West along what is known in Zanzibar as the northern caravan route, and he "feels assured that Dr. Kirk would repudiate the conclusions arrived at by Dr. Bryden, and maintain, on the contrary, that the epidemic in East Africa was not air-borne by the northeast monsoon of 1869, but was propagated along the line of human intercourse, as he distinctly states, from the Masai country."‖

Dr. Bryden makes no notice of Dr. Christie's reports in 1871 and 1872 to the Epidemiological Society of London.

From such an exposé, it is evident that if Dr Bryden is capable of so many suppressions and deviations of the truth about one epidemic, how many may he not be guilty of in the scores of epidemics he has described?

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* Kirk's Official Reports, Nov. 25, 1869, and Feb. 6, 1870.
General Aspect of Epidemic Cholera in 1869, p. 38.

† Christie, op. cit., pp. 97–118. ‡ Christie, op. cit., pp. 465–474.

§ Ibid, p. 460. ‖ Ibid, p. 466.

The simple truth of all this is, that the Bengal officer suppressed so much of the reports of these gentlemen as interfered with his theory, trusting, no doubt, that Zanzibar was so far away that no one would detect him; but fortunately the eyes of careful observers were on his work. Peters, of New York, first called attention to his error. Netten Radcliffe followed it up, and now Macnamara, Christie, and Kirk have sent him completely to the wall.

The reports of this Bengal statistical officer are filled with such inaccuracies and childish conclusions, that they are unworthy to be longer received as authority. It would be well could we stop here; but the results of this theory have had so much effect upon others; have caused so many "one-sided" opinions to be recorded, and have in reality produced such disastrous consequences in Bengal, that we are compelled to call attention to a recent and striking illustration. Two medical officers of the British service, on special duty with the Sanitary Commissioner with the Government for India, have, for the past few years, been frequently before the medical world through the medium of their microscopic examinations. The work which they have produced is certainly wonderfully good, and would stand forever to their credit, had they evidently not strained their conclusions to suit the theories now fashionable in Bengal. The most recent demonstration upon which we base this assertion is to be found in the "Lancet" of this year.*

Surgeon-Major J. Fairweather, Civil Surgeon at Delhi, reported that during the epidemic of 1875 a fatal disease strongly resembling cholera broke out among the cats of the city. He details at length a series of experiments made by him to determine the possibility of inducing this disease in cats by the excreta of human cholera patients, as well as the communicability of this disease from one cat to another. These experiments are conscientiously reported. The cases of failure are even more prominently noted than those of success, while the notes of post-mortem appearances are conspicuous. At the request of the Sanitary Commissioner, the entire viscera of two cats (one of which died of the natural disease and the other of the in-

* Lancet, July 22 and 29, 1876.

duced disease) were preserved in spirits and sent to Calcutta to be examined by Drs. D. Cunningham and Lewis, and the notes of these gentlemen appended to the original paper are a wonder of one-sided investigation. Their report concludes as follows: "*The specimen sent from Delhi showed no anatomical or microscopic appearance indicating that the animals from which they were obtained had been affected by cholera or any similar disease.*"

The grounds upon which this opinion was based appear to have been: 1. That the intestinal contents gave an acid reäction with litmus paper;* 2. That a round worm was found in the intestines, which worm frequently gives rise to intestinal disturbance and severe vomiting in their hosts; 3. That in an experiment made by them with two cats kept without food for twelve hours and then killed, the intestinal contents, according to their idea, were "scarcely to be distinguished from the specimen sent down from Delhi."

The civil surgeon at Delhi was certainly most remiss not to have been cognizant of the fact that *an epidemic of "round worms"* had attacked the cats of that city; and further, that the human epidemic had diminished the supply of feline food; for certainly these two causes are sufficiently powerful to account for the large number of dead cats found daily by the police inspectors, or else the opinion which we have quoted bears the impress of local influence.

The work of Christie contains much that is new and interesting. For the first time the great caravan routes leading from the city of Zanzibar are described. Upon them the way is now clear to study the travels of cholera (A.). These routes go out into the interior in various directions—south, west, northwest, and north. Upon them the caravans from the north meet the caravans of the south; commodities are exchanged, among the list of which is cholera (A.). Here we find history reproducing itself; this time upon virgin soil. It has been conclusively shown that this disease is diffused over India by the an-

* As regards the acidity of the intestinal contents, it must be borne in mind that the specimens had been immersed in alcohol for some time before examination.

nual "pilgrims' progress," having as an initial point of departure the great gatherings of the inhabitants. So we read in Christie "that at Berbera, on the African coast of the Gulf of Aden, just below the Red Sea, there is annually held a fair, which lasts from October until April, the town being entirely deserted during the interval. It may be described as the meeting-place in Africa of the numerous tribes and the traders of the Red Sea, the Persian Gulf, the Gulfs of Oman, Aden, and various parts of India. Formerly as many as 20,000 strangers were usually collected there at one time, and although the fair has decreased much of late years, still there is annually a very large gathering. The inland tribes of Africa leave Berbera in the month of March on their return journey."*

New light is also thrown upon the great cholera outbreak at Mecca in 1865, when over 20,000 pilgrims died of the disease in six days. It is shown that cholera (A.) was epidemic at the homes of many of the pilgrims who had arrived from India, and that the Mecca outbreak did not occur until after the arrival at that city of these people.

As we must henceforth look upon Mecca as a focus from which cholera (A.) has been distributed to the continent of Africa, it is well at this time to pass briefly in review some of the most important facts attending this great annual gathering.

For many centuries there has been a perennial stream of pilgrims to and from the holy city of Mecca. To be present at the Kourban Bairam, which, by reason of the Mohammedan year being shorter than the Christian by rather more than eleven days, is gradually shifted from season to season throughout the year, is the great aim of Mohammedan life. To accomplish this, homes are abandoned and the most exhausting journeys are undertaken. From the North Atlantic and Mediterranean shores of Africa; from Timbuctoo and Western Africa; from the borders of Siberia, the Danube, the Euxine, and the Sea of Azof; from the western frontiers of China; from India, South Africa, and the most remote Mohammedan extensions in the East, a constant stream of human beings moves to and from Mecca. For the pilgrimage, at least once in a lifetime, is bind-

* Christie, pp. 126 to 147.

ing on all true Mohammedans, and he who dies without having made it, may as well die a Jew as a Christian.*

The return of one body of pilgrims is never accomplished before another body is upon the move. They arrive at Mecca in great caravans from Egypt, Damascus, and Persia, or at Jedda (the port of Mecca) upon native vessels. The misery of these pilgrims and the hardships which they endure have been fully set forth by the few Europeans† who have succeeded in penetrating among the faithful at the celebration of their religious ceremonies.

The native vessels which carry pilgrims to Jedda rival those of any slave dhow ever captured. Each passenger receives but sufficient space upon which to squat. To stretch himself, he must encroach upon the territory of his neighbor. The intense heat of the day, the chill of the night, the privation from food and exercise, the loss of sleep induces a physical condition before their arrival but little short of death; many die of exhaustion before reaching port, and the great mass of those who land can with but difficulty drag themselves to the holy city.

In the caravans persons of importance travel with considerable comfort, but the poorer classes are absolutely foot passengers, making their way by assisting at the loading and unloading of the camels, and subsisting upon the charity of the rich. Begrimed with filth (for the Moslem law allows sand ablutions where water is scarce), unprovided with changes of raiment, overpowered with penury and fatigue, the aged and the young engage in a scramble for existence, each actuated by the hope of reaching their highest earthly ambition of kissing the *Black Stone* in the Kaaba, or else fainting upon the road, "they may depart to instant beatitude, for all who die during a pilgrimage are martyrs."

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* Al Koran. Translation by Sale, p. 152.

† A Faithful Account of the Religion and Manners of the Mohammedans, etc., etc. By Joseph Pitts. London, 1708.

† Translations of the Koran. Preliminary Discourse. G. Gale. London, 1801.

† Travels in Arabia. By J. S Burkhardt. Two vols. London, 1829.

† Narrative of a Journey into Khorasan. J. B. Fraser. London, 1825.

† Personal Narrative of a Pilgrimage to El Medina and Mecca. By Captain R. F. Burton. London, 1856.

As caravans approach El Medina they are greatly increased in number by the addition of smaller bodies of pilgrims, taking advantage of the convergence of routes to this city made holy by having been the home and by containing the tomb of the Prophet. By the 25th of July of each year the city is thronged by vast crowds who stop to visit the sacred tomb. From Medina there are few roads to Mecca; along them the pilgrims hurry; forced marches are made, and increased privations are endured. At certain fixed points upon all approaches to Mecca the ihram or sacred habit is put on, without regard to age or infirmities; the ordinary clothing is cast aside, and is replaced by two cloths; one of which is used to conceal the genitalia, while the other is thrown over the shoulders, and no other clothing. Either by day or by night it may be worn until the pilgrimage is accomplished.

With head and feet uncovered; forbidden to kill louse or flea upon their persons, or to hold intercourse with women, they enter upon the last stage of the journey. Of the ihram, Burkhardt writes: "Whether assumed in summer or in winter the ihram is equally inconvenient and prejudicial to health, particularly among the Northern Mohammedans who, accustomed to thick woolen clothes, are at this period obliged to leave them off for many days."

Having arrived at Mecca, the pilgrims, without rest or refreshment, enter upon their religious duties. These duties have been so frequently described that any repetition is unnecessary, save upon two points having a direct bearing upon the diffusion of cholera (A.). The first duty is the visit to the Kaaba, the holy temple, the tomb of Ishmael, in which rests the stone let down from Heaven. Upon arriving at the Kaaba, it is urged as an especial duty that all pilgrims shall drink and perform their ablutions at the holy well *Zem Zem*. This is the spring which gushed out for the relief of Ishmael when, with his mother, he was driven from the tents of his father Abraham. The well is in a room upon the southeastern portion of the Kaaba. Its mouth is surrounded by a wall five feet in height and about ten feet in diameter. Upon the wall attendants stand; the water is drawn in leathern buckets; each individual drinks all that he can, and upon each several skinsfull of the water are dashed.

With this holy water each devotee is permitted to wash all portions of his body above the waist, but it must flow unobstructed over the lower extremities.

The room is constantly flooded with the water thus used *en douche*, and it flows back into the well in a steady stream, carrying with it the impurities obtained from the persons of the pilgrims. This water, when first drawn, is milkish in color. It is tepid, saltish, and bitter, though to a less degree than the other wells of the town. Its inordinate use, and the pilgrims always drink it to excess, invariably induces diarrhœa in, and a crop of boils upon, the persons of those who drink it. It is so holy that none may be lost; with it the floors of the Kaaba and its surrounding porches are daily washed, and the water thus used is eagerly drunk by the lower classes of the pilgrims. Nearly every family in the town obtains daily a jar of this water, which they use only for drinking and ablutions. Few pilgrims quit Mecca without carrying some away in bottles of copper or tin. Clothes are dipped in it, folded, and laid carefully away, to be used at far distant homes as winding-sheets. It is impossible to overestimate the influence of *Zem Zem* water in the diffusion of cholera, both at and from Mecca.

The succeeding duties of the pilgrims are arduous in the extreme. Even the strong and hardy Burton, who visited Mecca as a Moslem, was unable to complete them through sheer fatigue.

The sanitary condition of Mecca, at the time of the festivals, is thus described by Burkhardt: * "Rubbish and filth covered all the streets, and nobody appeared disposed to remove it. The skirts of the town were covered with the carcasses of dead camels, the smell from which rendered the air, even in the midst of the town, most offensive, and certainly contributed to the many diseases now prevalent. Several hundred of these carcasses lay near the reservoirs of Hadj, and the Arabs inhabiting that part of Mecca never walked out without stuffing into their nostrils small pieces of cotton, which they carried suspended by a thread around the neck. But this is not all; at this time the Meccans are in the habit of emptying the privies

* Travels in Arabia. Vol. II., p. 85.

of their houses, and being too lazy to carry the contents beyond the precincts of the town, they merely dig a hole in the street before the door of the dwelling and therein deposit them, covering the spot only with a layer of earth. The consequences of this habit may be easily imagined."

Again he writes: "The termination of the Hadj gives a very different appearance to the temple. Disease and mortality which succeed the fatigues endured on the journey are caused by the light covering of the ihram, the unhealthy lodgings at Mecca, the bad fare, and sometimes absolute want, fill the mosque with dead bodies carried thither to receive the Imam's prayer; or with sick persons, many of whom, when their dissolution approaches, are brought to the colonnades, that they may either be cured by the sight of the Kaaba, or at least have the satisfaction of expiring within the sacred enclosure. Poor Hadjys, worn out with disease and hunger, are seen dragging their emaciated bodies along the columns. When they feel their last moments approaching, they cover themselves with their tattered garment, and often a whole day passes before it is discovered that they are dead. There are several persons in the service of the mosque employed to wash carefully the spot on which those who expire in the mosque have lain, and to bury all the poor and friendless strangers who die at Mecca."

As the Moslem endeavors to secure the rapid decomposition of the dead, the most primitive methods of interment are adopted. Their burial grounds are described as *dangerous places,* and Captain Burton was frequently obliged to resist with armed force parties who would bury their dead within the very shadow of his tent. Absolutely no sanitary precautions are adopted at Mecca to prevent the origin or spread of disease. The formulæ of Inshallah and Kismat are used in the place of methods of prevention, and epidemics are looked upon as punishment of God upon the sins of the world. In face of all the causes of disease which riot in this ancient city, it is an absolute fact *that cholera (A.) has never occurred there until after the arrival of the Indian pilgrims; until after they have joined the vast crowd, and until after the disease has occurred amongst them.**

* See Radcliffe on Origin of the Diffusion of 1875. Op. cit., p. 14.

An explosion of cholera (A.) having once occurred at Mecca, the terror and confusion becomes almost indescribable, but the sense of religious duties is so strong that the ceremonies are never abridged. They progress at their usual rate, and the dead and the dying are packed in with those as yet uninfected. The duties once completed, the vast crowds struggle to escape from the holy city even more eagerly than they did to enter it. With death staring them in the face, they set out upon the return journey. Their track is marked by the dying and the dead. None can stop to care for the sick or to bury the dead. It is a race for life.

Among the caravans, the virulence of the disease generally subsides in traversing the arid waste of Arabia, but the poison fixed upon articles of clothing, camp furniture, and merchandise, is the means by which outbreaks of the disease are occasioned in cities upon the routes to far distant homes.

Among the pilgrims returning in the native dhows, exposed to alternations of heat and moisture, filth and overcrowding, the disease remains in violent presence until land is made. Not infrequently dhows have been found at sea, drifting, with cargoes of dead and dying.

At Mecca it is thus shown the essential factors of a cholera outbreak are frequently gathered together. An immense mass of human beings, soiled and prostrated by long journeys, suffering from the want of food, the want of rest, the most intense mental excitement, the head and feet exposed, without covering, and the body with but a single cloth, to the fierce rays of the Arabian sun; scorched by day and chilled to the bones by night; the specific poison of cholera lurking in the garments of some of the pilgrims; *Zem Zem* water to furnish the medium in which this poison may multiply itself; the intense solar heat to hasten the development of virulence in this specific poison which until this combination of moisture and heat was inert and harmless; it may be asked, if these garments were infected with cholera matter, why was it that the disease did not develop during the long journey from which these people had just arrived, especially as frequent ablutions is an article of faith with them? The answer is found in the fact, that upon

long desert journeys water is a commodity more precious than gold, and that simply the form of ablution by rubbing the hands and face with sand is the rule under such circumstances. It is more than probable that of the 100,000 individuals who upon that day, in 1865, were gathered around the holy well Zem Zem, the bodies of nine-tenths had not known water since leaving their homes.

In connection with this Arabian story the influence of pilgrims and tramps of all nations and to other shrines in conveying infectious diseases from country to country presents itself in strong light, and to it the attention of sanitarians has of late years been directed. The pilgrimages to and from India and Arabia have been studied, their influence in the dissemination of disease has been positively determined, and it behooves us to apply the same measure of investigation to other countries. Russia, especially her southeastern provinces, is at present the most interesting of all the new fields of study. It will be remembered that in 1872 Pelikan announced that cholera (A.) had become endemic in this portion of the empire; but Netten Radcliffe was able to show that the disease which had existed for so long a time was not the result of acclimatization but rather that of constant importation.

Dr. John C. Peters, whose investigations have done so much towards establishing the truth as to this disease, and whose memory will be cherished long after the names of those who have attempted to defame him have been forgotten, has lately called attention to the pilgrims of Russia. He quotes Dr. W. H. Dixon,* who writes:

"Next to his religious energy, the mastering passion of the Russian is the irresistible craving of his heart for a wandering life. All slavonic tribes are more or less fond of roving to and fro, of peddling, tramping and seeing the world.

"A pilgrim perfect in his calling will go from shrine to shrine for several years. They go in bands of 50 or 60 and some reach the valley of Nazareth, the heights of Bethlehem and Zion and return to the shrines at Kieff. You meet them on every track, you find them in the yard of every house. They

* Free Russia, page 34.

creep in at back doors and carry about with them relics and rags which they vend at high rates. A bit of rock from Nazareth, a drop of water from the Jordan, a thread from the Saviour's seamless coat, a chip of the genuine cross.

"Thousands of such vagrants roam about the country, and the peasant who thinks the crossing of his doorstep by a pilgrim brings him blessing, not only lodges him for the night, but helps him on the road by day. Every year they go to Kieff and other Russian shrines, and to Jerusalem. Annually some hundreds achieve the highest effort of kissing the stones in front of the Redeemer's tomb."

In any country infested by disease and by tramps, who can truthfully declare that an individual in whom the disease has developed has not come in contact with infected persons? The negroes upon a Mississippi plantation may have been kept at their work by day, and, so far as their master was able, to their cabins at night; but who can positively assert that these cabins were not, during the darkness of the night, the refuge of some tramp, who departing before day left the disease behind him. The mere assertion of individual opinion is of no value if it can be shown beyond the possibility of a doubt that no communication with the infected objects, animate or inanimate, existed. The case is different. The evidence, however, must be submitted to critical investigation before it can be accepted as final.

Macnamara,* having access to the reports of the Government Emigration Agent at Calcutta, is able to throw some light upon the subject of the introduction of cholera (A.) into the West Indies in 1872, and the data furnished of cholera upon the *Sea Queen*, the *Humbar*, the *Poonah*, the *Kate Killock*, and the *Forfarshire*, in 1872; the *Emnor*, the *Golden Fleece*, the *Sir H. Lawrence*, the *Hereford*, and the *Lochlomond*, in 1873, has probably furnished the clew by means of which the introduction of the disease into the United States in 1873 may be robbed of its mystery.

It may be well to briefly recall the evidence found and offered so far as relates to the introduction of the disease in the United

* A history of cholera, p. 361.

States in that year. In attempting to investigate the initial steps of this outbreak, we were at once confronted by the assertion, that the disease had originated in or near the city of New Orleans, that it was of domestic origin, and that it could not be traced to any foreign importation. The task of eliciting any further testimony than that presented by the State Board of Health was well nigh hopeless, but by dint of patient investigation the following truths were established.

1. That the majority of the first 25 *fatal cholera cases* narrated in the report of the Board of Health originated upon the steamboat and ship levees of the city of New Orleans.

2. That a total of 6,079 foreign emigrants arrived at the port of New Orleans in 1873, 5,869 of whom were from Europe.

3. That the emigrant boarding-houses face the river upon the steamboat levee, and that during the months of January, February and March, 1873, the majority of these houses were filled with emigrants.

4. That the quarantine maintained at the Mississippi river station during the months of December, 1872, and January and February, 1873, was utterly worthless, and that the reports of the quarantine officer could not be relied upon.

During that investigation it was several times intimated to us that cholera (A.) had existed in the West Indies during the late months of 1872, but the only tangible fact we could find was the report of the United States Consul at Kingston, Jamaica, that a coolie ship had arrived at Bluff's Bay in that island, having lost some 60 coolies from the disease, and that one case had occurred upon the island since the arrival of that vessel. The official report of the Commissioner of Emigration of the State of Louisiana shows that in 1873, 210 emigrants were received by him from West Indian and South American ports, but no record of the number of passengers or the number of the crews of the vessels could be obtained. The evidence furnished by Macnamara will undoubtedly bear fruit in due season.

It is at present a notorious fact, that during the past year cholera (A.) having escaped from India spread to the eastern

* Cholera epidemic of 1873 in the United States, page 104.

shores of the Mediterranean. It is also true that during the past year there have been violent explosions of the disease in India, and that the disease more frequently breaks out in the hill country than it has ever before done. It is a fact that a considerable body of Mohammedan troops in Syria became infected with the disease, which they communicated to the surrounding country. *Again, cholera history is in the process of repeating itself.* Nations are arming for the final contest between the cross and the crescent. The followers of Mohammed are ranging themselves upon the line of the Danube. The Porte will from necessity call in all her outlying bodies of troops, and it may be looked upon as a matter of almost absolute certainty that before the eastern question is settled cholera will have invaded Europe; and in one or two years North America will in all probability be called upon to record a new epidemic of the disease.

The time therefore has come when it is necessary that medical men should consider with care all facts which have been elicited from previous epidemics. The subject is so vast, the interests at stake are so vital, that all minor considerations should be set aside, and while the differences of opinion of all fair reasoning minds should be respected, no one should hesitate to form and record his opinion.

By a considerable number of American medical men cholera (A.) is looked upon as *an endemic disease* of *malarial origin.* For the consideration of such gentlemen we would recall attention to a statement made in the history of the cholera epidemic of 1873, page 659. During the late civil war, the United States had in the field an army of 2,335,942, or during the years of the war a mean strength of about 783,905 men. These troops were in camps constantly exposed to all the vicissitudes of campaigns, or were in hospitals where, in spite of the lavish precautions which were adopted frequently, all the disadvantages of overcrowding and deficient food were present. Vast numbers of men were transported to and from the scene of active operations upon steam transports. Prison pens were formed, in which overcrowding, bad ventilation, indifferent police and unsuitable food were present to coöperate with local malarial

influences upon the unfortunate prisoners, and these events occurred within the limits of the worst malarial districts of the United States.

The record of the medical history of the war demonstrates that there occurred, in the army, of malarial diseases, *one million four hundred and sixty-eight thousand four hundred and ten cases, with forty-six thousand three hundred and ten deaths, and of intestinal diseases, one million seven hundred and sixty-five thousand five hundred and one cases, with forty-four thousand eight hundred and sixty-three deaths.** Add to these figures the statistics of the United States Navy and those of the Confederate Army and Navy, and the mass of circumstantial evidence is overwhelming. The figures at our command give a total of *ninety-one thousand one hundred and seventy-three deaths* from malarial and intestinal diseases occurring in a highly malarial district, and yet not one case of cholera (A.) occurred upon the continent. As if to emphasize this fact, of the *two million three hundred and thirty-five thousand nine hundred and forty-two men* composing the army of the United States, but *three hundred and five deaths* occurred from cholera-morbus. Reverse this picture. The war was at an end, the armies of the North and of the South had been disbanded but a few short weeks, when cholera (A.) *having been imported into the United States*, the movements of recruits for the small standing army of the nation diffused the disease and induced the American epidemic of 1866 and 1867.

By the movement of troops in India this disease has, time and again (since the memorable epidemic in the army of the Marquis of Hastings) been carried from one station to another. In 1832 the troops en route for the Black Hawk war scattered the disease over the Northwest and down the Valley of the Mississippi to the city of New Orleans. The Crimean war exhibits another notable instance of the diffusion of cholera (A.) by the movements of armies. The movements of a few recruits in 1866 scattered the disease over the States, and in 1867, by the movements of but two infantry regiments, the disease was diffused over the high dry plains of Kansas. We, ourselves,

* Cholera Epidemic of 1873 in the United States, p. 659.

in the latter year, were upon duty with a moving column of troops infected with the disease, among whom it did not "die out" until the head-waters of the Arkansas river were reached, in the heart of the Sierra Nevada.

This evidence is so plain and so convincing that it is almost a work of supererogation to add additional testimony. Upon it we would present for consideration the following propositions:

PROPOSITION I.—*Cholera (A.) has never yet originated upon the North American Continent, but that it has invariably reached its shores after it has been transported across the Atlantic ocean.*

The stability of this proposition having been established, the work of arresting the disease after it has been imported and of protecting the interests of the communities committed to our care, is a matter of small difficulty. (We write of communities in the interior of the continent.) But there are many who will not recognize the value of this illustration, and to such we would throw out for consideration the following queries: Has an epidemic of cholera (A.) ever occurred on the American Continent at a time when the disease was confined to India? Has an epidemic of cholera (A.) ever occurred in the interior of the American Continent prior to the announcement of its arrival in Western Europe, or at the seaports of North America?

During the past few years we have heard much of two instances of mysterious development of cholera (A.) during the year 1835 in the States of Kentucky and Mississippi, but the gentlemen who use these illustrations either forget or are ignorant of the fact that throughout the years 1832, 1833, 1834, and 1835, cholera (A.) was not only epidemic in the United States, notably in the Valley of the Mississippi, but that each year a fresh importation of the disease occurred. In 1832 cholera (A.) was imported into the harbors of Quebec and New York from Great Britain. In 1833 it was imported into New Orleans from the West Indies. In 1834 Quebec again received the disease from Europe, and in 1835 New Orleans, La., and Charleston, S. C., received it directly from the Island of Cuba.

We assert confidently and without fear of satisfactory contra-

diction that all the facts which can be gathered prove the truth of this proposition, and we maintain that upon its truth the safety and well-being of all communities lying within the borders of North America depend, and these communities should be possessed of sufficient information to enable them to discriminate between counsellors whose opinions are valuable and those whose opinions are worthless. The time has come when the health office of great cities should not be entrusted to inexperienced men from party considerations alone; such individuals are in the majority of instances unable to properly discharge their duties, and they may often be classed among those (to borrow an illustration) who are ignorant even of their own unfitness, or of the very existence of knowledge which they do not themselves possess.

The diffusion of a proper knowledge of cholera (A.) among the laity of American communities is influenced to a marked degree by those medical men who are unable to distinguish between cholera Asiatica, cholera sporadica, cholera morbus, and some forms of pernicious intermittent and remittent fevers. These gentlemen will tell one "*that they know cholera, for they have treated it all their lives,*" and they are seemingly oblivious to the fact that America has known but five epidemics of the disease; that there was a lapse of *thirteen, four, ten,* and *six* years respectively between each epidemic, when the United States was absolutely free from the disease.

We are reminded of a notable instance of this ignorance which occurred in a large city during the heated term of 1874. The leading newspaper of that city one morning contained the startling intelligence that a fatal case of Asiatic cholera had occurred the day before, giving detailed particulars. Being anxious of adding to our stock of cholera knowledge, we telegraphed the gentleman reported as having had charge of the case, asking its identity, and received the answer now before us. "*A case of genuine Asiatic cholera.*" Subsequent investigation proved it to have been a case of sporadic cholera, occurring in the person of a young man who was in the last stages of phthisis pulmonalis. This case occurred in the second story back room of a tenement house in a dirty portion of that city.

The bed upon which the patient died was continuously used by other members of his family; eight days after his death we found the clothing that had been removed from his body under the bed. No other case of sickness had occurred in either the house or neighborhood; the only precaution which had been adopted was disinfecting the privy vault with lime. Had this been a case of genuine Asiatic cholera, how different would have been this story.

It is well known that isolated cases of the diseases named do occur during the warm months, especially in this climate; that they are not only startling, but they resemble so closely cholera (A.) as to create doubt in the minds of observers that they are of a type which is harmless, save to the individual sufferer. But has an epidemic of such cases ever occurred? Is there any instance upon record, authenticated or not, of sporadic cholera devastating families or communities? Have friends, attendants or physicians ever gone home from the bedside of such cases to die themselves of the disease? Have not such cases invariably occurred in individuals in whom the cause of the attack could be found?

Dr. Nichols has furnished the history of a disease which appeared at a fashionable watering-place in 1875,* which was characterized by a "sensation of giddiness, nausea, vomiting, diarrhœa, abdominal pain, fever, loss of appetite, continued indigestion and mental depression." The cause of this outbreak was satisfactorily traced to the use of ice cut from a shallow pond, the water of which was contaminated with decomposing vegetable matter. This was a marked illustration of the effect produced by drinking water impregnated with vegetable matter in a state of decomposition. The analysis showed that the amount of organic matter held in solution was very great, but great as it was, it did not produce cholera, for the simple reason that the specific poison of cholera was wanting. Had cholera (A.) been in existence in the United States that year; had any cases of the disease occurred at that hotel; had the drains,

* An outbreak of intestinal disorder attributed to the contamination of drinking-water by means of impure ice. A. H. Nichols, M. D., Seventh Annual Report of Massachusetts State Board of Health, p. 467.

cesspools and wells of the establishment received the excreta of such cases, Rye Beach would have been depopulated, and the explosion would have been seized by some individuals as another startling illustration of the truth of their hypothesis. But this opportunity was not afforded, the use of the impure ice induced a well nigh fatal illness, but no cholera.

To the history of diseases which in their symptoms assimilate cholera (A.), we are indebted to Dr. J. F. Gray, of Bombay, for a description of what he calls stokers' collapse.* He writes, we find that the intense heat (120° to 140° Fahr.) to which the engineers and stokers upon steamships in the Peninsula and Oriental Company's service are exposed, not infrequently induces after or during excessive perspiration the symptoms of cholera, minus the diarrhœa and vomiting. The cases, when first seen, bear a striking resemblance to the algid stage of cholera.

"The coldness, cramps and collapse of cholera were considered by Snow to be simply the results of the abstraction of water from the tissues by a rapid and excessive exudation of fluid from the mucous membrane of the alimentary canal. In the affection I have described, the same train of symptoms appeared to be induced by the excessive exudation of fluid through the skin, this exudation being excited by exposure to great heat, and unlike that of cholera without the operation of a specific morbid poison."

The next point of interest to American observers which we would present is:

PROPOSITION II.—*That Cholera Asiatica is diffused by the migrations of individuals who are infected with the disease; that in the dejections of these individuals there exists an organic matter, which at a certain stage of development is capable of reproducing the disease in the alimentary canal of such persons to whom it may gain access; that articles of personal clothing, household furniture and merchandise, becoming infected by soiling with the excreta of cholera cases, retain indefinitely their*

* Medical Times and Gazette, September 25th, October 9th and 23d, November 27th, and December 4th, 1875.

power of infection, and that through their agency outbreaks of the disease may occur at any distance from the point of original infection.

We have already had occasion to state that the results obtained by Mr. Netten Radcliffe in his investigations of the two last European epidemics of cholera (A.) demonstrate (in the words of Mr. Simon) that human intercourse is the single factor in diffusing the infection of this disease. These results corroborate those which were obtained from the investigation of the epidemic of 1873 in the United States, which we had the honor to conduct. The general conclusions obtained from that work have been recognized and acknowledged by all who have recorded their opinions, with but few exceptions. Two of these dissenting gentlemen, although at the antipodes, present so remarkable a unanimity of ideas that they deserve some notice at our hands.

According to the review writer of each of these Journals* our poor work was a *failure*, and the American epidemic of 1873 another *grand opportunity lost*, why! because we failed to find any *local* cause of the disease, and because we were enabled to trace, step by step, the progress of the epidemic forwards and backwards throughout the entire Mississippi Valley. Fortunately for us, one review bears upon its face the impress of the Cincinnati Health Office, and the other is from Bengal.† The writers of both reviews seem to have been impressed with the belief that but few thinking men would obtain the volume in question, and that therefore they were safe in their misrepresentations, unsound so far as Ohio is concerned, but very correct for India. We notice the Indian review (having passed without further remark that from Cincinnati) simply because it is another instance of the utterly unreliable work which issues from Bengal upon this subject. The Calcutta writer finds nothing of value in the American report, save the statement which emanated from the Cincinnati Health Office, a portion of which he reproduces; but he most carefully omits any mention of the

* Cincinnati Lancet and Observer, November, 1875.

† Indian Annals of Medical Science, January 1876.

papers of Drs. Clendenin and Armstrong, or the facts collected by the editor from other reliable medical men, which utterly refutes the health office conclusions. The other references contained in this review are just as inaccurate and unreliable.

No notice is taken of the fact, that of *two hundred* and *sixty-four* infected localities the disease was distinctly and positively traced in *two hundred and forty-eight*, and that of the remaining *sixteen* localities the trail of the disease could not be found in *nine* instances, while at but *seven* points did the professional men pronounce in favor of any local agency.

We most unhesitatingly affirm that cholera (A.) was in 1873 diffused over certain portions of the United States through the agency of human intercourse alone; that its ravages were restricted by human agency alone, in the shape of the prompt and efficient sanitary measures adopted by the vast majority of the physicians within the area of infection. It is most conclusively shown by the narrative of the epidemic of 1873 that wherever the human agency theory was recognized the disease was stamped out, but that wherever the local origin theory prevailed, there the disease rioted. We affirm that the city of Cincinnati was saved from the great diffusion of the disease by the very general system of disinfection adopted by the majority of the medical gentlemen of that city, but a small portion of whom are advocates of the local origin theory, which was adopted by the health office of that city. We affirm that in localities in which the local sanitary authorities were committed to any telluric theory, it was a work of patience to obtain any facts as to the local outbreak. That the disease had developed and spread was not concealed; that many deaths had occurred were admitted; but whenever the attempt was made to uncover the surroundings of these cases, every obstacle which indifference and bigotry could devise had to be combated; while in other communities (sometimes lying side by side), where the agencies of human intercourse were acknowledged, all the facts pro and con were attainable.

We are charged by our Indian reviewer of having made no exhibit of the area of infection in the United States in 1873. Had the writer done more work with his eyes and less with his

fingers, he would scarcely have been so foolish. The area of infection was noted with care, and in this work we had the invaluable assistance of Dr. A. B. Judson, of New York. This gentleman presented at the 1873 meeting* of the American Public Health Association an elaborate report upon the infected localities, based upon newspaper reports collected during the progress of the epidemic, and a comparison of the map compiled by Dr. Judson in 1873, and that of ourself compiled in 1875, after a careful inspection of the entire field, will show but few points of difference. At some localities noted by Dr. Judson, upon the faith of telegraphic news, later investigation proved that no cholera (A.) had occurred.

Upon the second count of this proposition, it is impracticable to do more than to refer to the vast series of experiments upon the results of which the truths have been propounded. The report of Dr. Burdon Sanderson† on the experimental proofs of the communicability of cholera, and that of Dr. Thudichum‡ on cholera chemically investigated, have not yet been refuted, while they have been corroborated by numerous observers.

The very remarkable incident noted by Macnamara§ of the 19 men who drank cholera stuff, and who thereby excited the ire of the Indian reviewer, although it did not attract serious attention in Calcutta (a fact which we may forgive since the swarming of locusts require so much observation), is still accepted in both Europe and America as a proof of the infectiousness of cholera discharges, and as directly corroborative of the experiments before noted.

The narrative of the epidemic in the United States in 1873 abounds in instances illustrative of this count of our proposition. They have been given upon the evidence of medical men, honest and true, who record what they see with their eyes and believe with their hearts, uninfluenced and unprejudiced by the hypotheses of others.

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* Public Health. Vol. I., pp. 224, 256.

† Public Health. Ninth report of the medical officer of the Privy Council. London, 1867. Appendix, pp. 434, 458.

‡ Idem., pp. 458, 501.

§ A treatise on Asiatic cholera, pp. 196, 381, 383, 395.

It has been advanced, and we are compelled to think absurdly, that this practical theory has been damaged by the experiments which Drs. Lewis and Cunningham* have been conducting during the past seven years at Calcutta. The work of these gentlemen, so far as it goes, is most creditable, but it is far from being an investigation into the nature of the agent or agents producing cholera. It is an extended microscopic examination of the blood of cholera patients; the experimental injection of cholera fluids and solutions of normal alvine discharges into the veins of dogs; and the experimental section of the splanchnic and mesenteric nerves.

As cholera observers, outside of Bengal, have long since cast aside any toxicæmic theory, as the practical theory calls for no investigation of the blood save as a secondary consideration, and as the experiments of Moreau have, as yet, not been verified; and lastly, as these gentlemen have seen fit to omit all duplication for purposes of comparison of the experiments of Sanderson, Thudichum, Thirsh, and so many other observers, we are utterly at a loss to see or to appreciate their explosion of *old fallacies*, or the claim of their friends that their labors (most valuable they may be, one-sided as they are at present) should be accepted as undoubted authority. Indeed, we must hold them as strong circumstantial evidence in favor of the practical theory.

Upon the final count of our proposition, the evidence presented by Dr. McCraith of the outbreak of cholera (A.) near the city of Salonica, is a valuable addition to the mass of evidence already at our disposition. During the investigation of the epidemic of 1873 we were able to collect three rather remarkable instances of the efficiency of inanimate objects in diffusing this disease. These truths can not be set aside by any contra-minded sanitarians as ridiculous attempts to prove theory; they are obstinate and long-abiding facts, which can never be swept aside, and which are worthy of being again presented. The first instance was obtained through the assistance of Dr. William Clendenin, of Cincinnati.† A family named Lent-

* A report of Microscopical and Physiological Researches into the Nature of the Agent or Agents Producing Cholera. Calcutta, 1872.

† Epidemic of 1873 in the United States.

Have left their homes at Tubbergen, a small village of Overyesel, Holland, lying near the Hanover border, went to Rotterdam, and from thence to Liverpool, from which port they sailed for New York on the steamer "City of Limerick." They arrived July 5th, and the next day went forward, *via* Baltimore, Md., and the Baltimore and Ohio railroad for Carthage, Ohio, a small town ten miles north of Cincinnati. On the 9th or 10th they arrived at Cincinnati late at night, remained in the railroad depot building all night, and went early the next day to Carthage.* This family remained perfectly well until July 15th, two days after they had unpacked their effects, when cholera broke out among them, and the family were swept away. Strangely enough, the only cases of the disease in this town could be traced to this family, and the introduction of the disease into Longview Insane Asylum is of great interest. This family must have brought the disease with them from Holland. They were not sick on the journey. Until they reached Cincinnati they had touched no infected point in America; they could not have contracted the disease in Cincinnati, for the health office has announced that no steamboat landing or railroad depot of that city were in any way connected with the disease.

Dr. Frost,* of Minnesota, has furnished us with another illustration, which we have been at the pains to verify step by step. A family named Antonson left Vük Alfoden, some two hundred miles north of Bergen, for the United States. They remained at Bergen some three weeks, and finally sailed on the steamer "Peter Japson" for New York on the 25th of June, 1873.* Arriving at New York, they were transported to Grand Haven, Michigan, *via* Pittsburgh, Pa. From Grand Haven *via* Milwaukee to St. Paul, Minn., and from thence to Willmar. From Willmar the party started upon a wagon-ride of forty miles to the Crow River settlement; and it being warm weather, they unpacked boxes of clothing which had not been touched since leaving the Baltic. The wagon journey occupied two days, and when they reached the Crow river, cholera was among

* Cholera Epidemic of 1873 in the United States, pp. 355, 440, 462.

them, and they spread the disease among the settlement, none of the members of which had, in any other way, been exposed to the disease. After leaving Bergen, this family of Swedes had been in no way subjected to the influence of the disease; they traversed no portion of the United States that was at the time or subsequently infected by cholera (A.), with the single exception of Pittsburgh, Pa., where, some five weeks after this family had passed through that city, a few traceable cases occurred. Prior to their arrival, the Crow River settlement had been perfectly healthy, and the Antonson family certainly communicated the disease to their friends. This instance certainly duplicates that on board the "Swanton" in 1848.

Dr. Van Velson, of Yankton, Dakota, has shown that by means of Russian emigrants, who came to the United States direct from the southern districts of Russia, cholera was developed in the city of Yankton after said emigrants had unpacked their personal effects at their new home, high up on the Missouri river, and there is every reason to think that during the year 1874 the disease existed among them in their out-lying settlements; but of this, from good and sufficient reasons set forth by Dr. Van Velson, no positive information can be obtained.*

It is a proposition equally easy to demonstrate that cholera (A.) is an infectious disease, resulting from an organic poison, which, having gained access to the alimentary canal, acts primarily by destroying the intestinal epithelium, and that consequent upon this destruction the profuse alvine dejections occur, which drain the blood and tissues of their water, as a consequence of which the late symptoms of the disease are developed, and that to the rapid process of dehydration to which the body has been subjected are due each of the post-mortem changes which have been reported. Space, however, forbids the extension of the subject to such length.

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* Upon page 366 of the History of Asiatic cholera, Macnamara having unjustly accredited these instances to a gentleman who certainly can make no claim to originality in the matter, it is but proper to state that each of the three histories was an outgrowth of the investigation committed to my care, the report of which, in advance sheets, were placed in the hands of the gentleman to whom Macnamara accredits them.

The analogy between the symptoms presented in cases of death from hæmorrhage and those of death from cholera (A.) are most striking; but it must be borne in mind that the collapse of cholera differs from that of hæmorrhage in this, that in cholera it is but the fluid contents of the blood vessels that are drawn off, the solid constituents remain, the corpuscles are rendered unfit to carry oxygen, and the diseased mucous surfaces are unable to absorb fluids which may come in contact with them. In hæmorrhage the entire constituents of the blood flow away, but the power of absorption is present and is rapidly accomplished.

The rationale of a case of cholera (A.), when viewed from the standpoint of this *practical theory*, is as follows: The specific poison of cholera gaining access to the stomach of an individual whose digestive powers are impaired (either by disease, fatigue, mental emotions, privation from food, excessive debauch of every description, or from anything which may tend to render the intestinal juices alkaline), a rapid proliferation of the morbid matter takes place. This morbid matter fastens upon the intestinal epithelium, destroys and strips it off. The irritation caused by this induces the primary symptoms of the disease. The villi of the small intestines having lost their epithelial covering, an exudation of the watery constituents of the blood occurs. As the dehydration is accomplished, the tissues are called upon, and to the rapid abstraction of the major portion of the water in the economy the subsequent symptoms of the attack depend.

Instances are recorded of the recovery of dropsical patients from attacks of cholera (A.) where so complete had been the abstraction of the fluid that the skin hung in loose folds upon the body.*

If cholera (A.) is a disease of the intestinal mucous surface; if the symptoms of the disease are induced alone by the rapid dehydration of the economy; if it depends alone upon the rapid pouring out of the fluid portion of the blood, *why is it that the disease is not invariably fatal?* Why is it that, if left to Nature, about one-half of those attacked with the disease recover

* Medical Times and Gazette, August, 1866, p. 138.

of themselves, although suppression of the urine may have existed, and fever and other complications may have occurred?

To our mind, the most plausible answer which can be advanced, is that of Dr. Pacini, of Florence, "that in some cases the vessels of the mucous membrane beneath the detached epithelium become clogged with the viscid blood, which acts, in fact, as an impediment to the circulation through them, serving a curative purpose, just as a coägulum would do in the case of a wounded artery; for, by arresting the circulation, new epithelium is allowed to form over the abraded portions of the intestine, preventing the outpouring of the serum from the denuded vessels."*

This is an eminently practical theory of Pacini, and one which has all the well-known symptoms strongly in its favor; for we well know that the vessels of the mucous membrane become not only plugged, but at times they are intensely congested, and occasionally as reäction comes on they give way with a resultant hæmorrhage.†

The chemical analyses of the rice-water discharges of Thudichum are strong evidence in support of his theory. He writes: "Rice-water contains the following ingredients: Vibriones, cells from the surface of the intestines, granular débris of cells, mucine, modified hæmochrome, albumen, albuminous body giving rose-pink reäction, butyric acid, acetic acid, ammonia, leucine, inorganic salts. It is in an active state of decomposition and evolves gas, which at first is composed almost entirely of nitrogen. Soon, however, carbonic acid prevails, and ultimately nothing but carbonic acid is evolved. At one period some hydrogen is developed. We can not discover any specificity in the above ingredients, but many of them are analogous to the products of ordinary processes of putrefaction. If it is admitted that cholera evacuations acquire infective powers only after the period of fermentation, it is also easy to understand that the specific infecting power may belong to albumen or mucine at a particular stage of disintegration or chemical cleaverage."

The examinations of Thudichum, conducted with all the

* Macnamara, op. cit., p. 345. † Idem., p. 449.

appliances of a liberal government, indicates the existence of a considerable amount of molecular matter in these dejections; and it is this molecular matter which is claimed to be the specific infecting cause, when it has advanced to a certain stage of decomposition. This matter has been most carefully studied by Macnamara,* and from this study he is led to insist that it is this molecular matter having advanced to that stage, characterized by the presence of vibriones (not the vibriones themselves), which is capable of inducing the disease. It is asserted by him "that the fresh dejecta in the active stages of the disease contain no vibriones, but toward the end of collapse, when the evacuations are passed less frequently, probably remaining in the intestines for some hours, vibriones may be seen in the fluid immediately after it has been passed."

By the majority of observers, it is insisted that the destruction of the intestinal epithelium occurs during the life of the patient. Indeed, this is an essential to the perfection of this practical theory in the etiology of the disease. All the events in the clinical history of a case of cholera seem to bear out this theory; but Parkes, Aitken, Bruberger, Lewis, Cunningham, and others, object to this theory of ante-mortem epithelial destruction, on the ground that they have been unable to discover any evidence of epithelial cells in fresh cholera stools. The solution of this difficulty, it seems to us, to be most easy. Each of the gentlemen enumerated have based their opinions upon the investigation of rice-water dejecta; that is, they have looked for the fragments of a dam in the mighty rush of the waters that followed its destruction. The rice-water dejecta are the result not of an effort on the part of Nature to eliminate from the blood any morbific material which it may contain, nor do they result from any disturbance of the nervous system, but they occur simply because the specific poison of cholera has stripped off the epithelial layer which formed the protective covering of the blood vessels, and there is naught to prevent a rapid exudation of the fluid portions of the blood. As the disease advances, the entire mucous surface of the alimentary canal, from the mouth to the anus, is stripped of its epithelium,

* Op. cit., p. 334.

and the process of dehydration is more rapidly performed. The dejecta in which to look for these fragments of the epithelium are therefore those of the premonitory stages, or in the first that are rice-water in character, not in those which are voided after the intestinal canal has been washed by the torrent which has poured through it.

Oh, men! who hold in your hands the most sacred domestic ties, abandon the hypotheses which have caused sorrow and mourning so often throughout the land. Abandon the teachers who have led you astray, and whose counsels have caused such destruction of human life. Study this practical theory. It is but a legitimate deduction from many facts not contradicted by equally numerous and equally well-attested facts. This theory has been the means of saving thousands of valuable lives; it has lessened the cries of widows and orphans; it is the means appointed by which dire calamity may be averted.

The injury inflicted upon the world by the apathy and egotism of the Indian sanitary authorities can never be counteracted. These authorities stand arraigned before the world for having permitted the continual escape of this dread disease from its home. Already Persia has so often been invaded that the domestication of cholera (A.) in that country may be taken as an assumed fact. Asia and Europe are, and perhaps always will be, exposed to its inroads; but America, surrounded by water, a hemisphere to itself, with natural advantages which no other nation enjoys, may, by the exercise of scientific prudence, keep the disease from its shores; nay, may defy it.

The remedy is simple. 1. *Prevent the importation of the disease.* In a series of papers which we published during 1874 in the "American Practitioner," and later in the "History of the Cholera Epidemic of 1873 in the United States," we advanced and advocated the establishment of a national health office; not an office exercising any sanitary jurisdiction over the country, but an office at which sanitary information might be collected from all quarters of the globe, and from which prompt and reliable data could be furnished to all local health offices of the movements of infectious diseases. The small annual outlay which such an establishment would cost offers an

efficient protection to the lives and property of 40,000,000 of people. Official information of the state of the yellow fever epidemic at Havana would have placed in the hands of the authorities of Savannah knowledge which would have been a power in protecting that beautiful city from the ravages of the disease.

2. Stamp out the disease in each and every instance in which it appears, after access to the continent has been gained. This is to be accomplished by the thorough disinfection of all of the excreta of such cases; the destruction of all fabrics that may become soiled with such discharges, and the employment of other hygienic measures.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—*A New Anti-pruritic Remedy.* By L. DUNCAN BULKLEY, A. M., M. D., of New York.

Eighteen months ago we presented to the Profession the "*liquor picis alkalinus*,"* which had proved itself valuable in certain cutaneous affections in relieving itching in many instances, and whose value in this and other directions is daily becoming more evident. The failure of this as an anti-pruritic in some cases, as might be expected, has led us to the adoption of the compound here presented, which has thus far rendered inestimable service, but which has not, to my knowledge, been heretofore commonly known.

More than a year ago I noticed in a medical journal the item that equal parts of hydrate of chloral and gum camphor when rubbed well together are converted into a fluid substance—which observation was repeated in the "Boston Medical and Surgical Journal" of February 19, 1874, with the variation that the substances were to be mixed together, and the conver-

* *Recipe.*—Picis liquidæ f℥ij; potass. causticæ, ℥j; aquæ distill. f℥v; ft. liq. picis. alk.; use diluted. Archives of Scientific and Practical Medicine (Brown-Séquard), February, 1873.

sion would take place in a few days; no therapeutical suggestion was made in either instance. Stepping into a drug store, I immediately tested the truth of this, and found, after a few minutes' trituration in a mortar of powdered camphor and Schering's chloral, that in place of two crystalline substances a transparent colorless fluid existed, of the consistency of glycerine—no solvent having been added. It at once occurred to me that this would be of value in allaying itching, inasmuch as camphor acts ofttimes very gratefully when locally applied for this purpose, while I have long employed the chloral internally to the same end.

I therefore had some ointment prepared after the formula:

℞—Pulv. gummi camph.;
Chloral hydrat., āā ℥j.;
Ung. aquæ rosæ ℥j. M.

Rub the chloral and camphor carefully together till fluid results, then add slowly to the ointment, mixing well.

This, when applied to the healthy skin, produces no effect, but possesses great power in arresting itching without overstimulating the parts. It does not answer when the skin is at all broken; it is then necessary to employ other less irritating agents, but the burning sensation caused on its first application lasts but a few moments, while the relief occasioned I have known to last for hours, or even a whole day.

This compound is soluble also in almond oil, alcohol, and ether to a considerable strength, as also in collodion. I have never employed it other than in the formula above given, except that I have ordered it of a less strength, half a drachm of each to the ounce, also increased to a drachm and a half of each to the same quantity. I should expect a solution of moderate strength in collodion would prove useful in localized itching. I will give two or three illustrative cases:

Mrs. J. C. L., aged thirty-four, seven months pregnant, was distressed with a most intense itching, which commenced six weeks previous to her being referred to me by Dr. H. B. Sands, on December 4, 1873. The itching was first noticed on the left arm near the shoulder, then on the right and on both shoulders behind, and soon the outer surfaces of the legs and

the region of the waist became affected. When first seen her condition was indeed pitiable, the more so as she had become convinced that the distress would last until confinement. Her general condition was poor, she looked worn and nervous; pulse 104, and weak; tongue coated; appetite very poor, and bowels irregular in action. She gave the history of being subject to neuralgia, and of having had a similar attack of pruritus when not pregnant nine months previous, which disappeared on the use of six sulphur baths. The skin when seen presented only the appearances due to scratching, namely, excoriated points and lines, resembling those seen in phtheiriasis, but no traces of pediculi could be found, nor indeed could any suspicion of this exist.

Diuretic and tonic treatment seemed to effect very little, but some relief was afforded by the alkaline tar-wash before referred to, diluted about one part to sixteen of water. This was only temporary, and chloral and bromide of potassium internally failed to procure even a quiet night. The chloral and camphor in ointment, a drachm each to the ounce was then prescribed, and the relief obtained was immediate and permanent, that is, with the application repeated every few hours at first, for she never really suffered from the itching after its first use, and in six days she had no further need of it. It is but right to state that she continued the same internal treatment as before, but she did not require any medicine to induce sleep. On the disappearance of the cutaneous symptoms a hoarseness occurred, evidently nervous in origin, which lasted until delivery, as it had accompanied also a previous pregnancy to the end.

Mrs. F. C. M., aged 32, a lady of highly nervous organization, who was in the habit of greatly overworking in a literary line, has had several attacks during the last two and a half years of a very peculiar pruritus extending down the right arm and on the right shoulder behind to the median line. The itching and burning she describes as horrible, and the skin was found to be hard and scratched. On former occasions she had obtained very great relief from the *liquor picis alkalinus* diluted, with internal medication, but nervous exhaustion had been repeated so often by excessive literary work that all the

old measures failed to give relief at the last attack I witnessed. The nerve distress is further shown by a partial writer's cramp.

She was directed to abstain from using the right hand as much as possible, substituting the left, and was given the chloral and camphor ointment, a drachm each to the ounce. The relief following the first application was prompt and perfect, and a few days sufficed to remove the itching entirely, she using the same internal treatment which before proved ineffectual; no return of the pruritus has yet occurred after the expiration of several months. Whether on a recurrence of the skin trouble the remedy will still exercise as beneficial an influence it is impossible to say, but the relief afforded in this instance was as striking as it was gratifying. I will give one more case:

Mrs. B., aged 56, a large, fleshy lady, was kindly referred to me by Dr. A. L. Loomis, for a *pruritus vulvæ* which had lasted six months. During the previous summer she began to have more or less irritation about the vulva, and had scratched herself to relieve it, continuing to do so till seen by me in December, 1873. A very large number of remedies had been most judiciously applied, with but very little relief to the distressing itching, and on inspection the parts were found to be greatly thickened and discolored with more or less excoriation reaching down on the thighs and toward the anus. The clitoris was enlarged and elongated, but no follicular condition of the mucous membrane, no cervical erosions, nor any apparent cause of the trouble could be discovered. The urine was examined and gave no indications of glycosuria. The irritation and itching of the whole region, she said, were beyond description, and her troubled expression of face told the same story. She was then keeping the bed and using hot hip-baths night and morning with some comfort. These latter were directed to be exchanged for fomentations with very hot water frequently repeated, and iron, quinine, and Fowler's solution were given, also a diuretic mixture later.

Some considerable amelioration was obtained subsequently by the alkaline tar used in the other cases, but soon this seemed to have lost its effect, and various other applications failed to cause improvement. After about two weeks' treatment, the

camphor and chloral ointment was prescribed with the happiest results, the itching disappearing entirely sometimes for seven or more hours after its application, while in the meantime the patient gained in physical condition, and the thickened state of the parts which had been caused and kept up by scratching subsided, and she was able to be up and around with a great degree of comfort. There still remains some itching at times, and the patient has just left for Europe for change of scene, etc., though for the last two months or so the irritation has been very slight. The relief afforded by the ointment in this case far exceeded that obtained from any other measure attempted.

In using this remedy the only caution I know of is to see that the parts to which it is to be applied are not greatly if at all excoriated by scratching, as the application is then pretty painful, and the unprotected derma is irritated and possibly inflamed thereby.

From its success in these three forms of itching here exemplified, namely, that of pregnancy, that of the vulva, and that due to a pure neurosis, as in the second case, I would suggest the employment of the camphor and chloral compound in the general pruritus attending the senile alterations in the skin, also in anomalous cases and in those of chronic papular eczema or lichen, where itching is a prominent feature. Likewise in the *pruritus hiemalis* lately described by Dr. Duhring, of Philadelphia, in the "Philadelphia Medical Times," of which I have seen some instances.

The ointment loses strength on standing exposed, and should be made fresh very frequently.—*Trans. Amer. Med. Asso.*

ART. II.—*A Case of Excision of both Ovaries for Fibrous Tumor of the Uterus, and a Case of Excision of the Left Ovary for Chronic Oophoritis and Displacement.* By E. H. TRENHOLME, M. D., of Montreal.

The excision of both ovaries was performed on the 13th of January, 1876, upon a patient thirty-two years of age, and thirteen years married, who for seven years had been suffering

severely from pains and hæmorrhage preceding each menstrual period. Every effort had been tried to relieve the patient without avail; and, as her protracted and increasingly severe sufferings threatened at no distant period to terminate her life, it was determined to remove both ovaries. This course was adopted as being less serious than extirpation of the uterus, and as offering a reasonable hope that, with the absence of the ovaries, menstruation would cease and the tumor remain quiescent. The operation was successful, and although there were monthly flows during the three following months, such hæmorrhages were entirely checked by astringents without injury to her general health. Such a result could not have been attained had the monthly hæmorrhage been really menstrual. There seems to be strong grounds for believing that *nidation* and *denidation* can take place only under the influence of the ovaries. This aspect of the matter as illustrated by this case opens up a new view of uterine pathology and treatment.

The fact that uterine fibroids often cease to trouble patients who have passed their climacteric, indicates the probably successful treatment of such growths by premature age being artificially arrived at by the removal of the ovaries.

The second case, that of chronic inflammation of the ovary with displacement, is that of a lady twenty-seven years of age, who began to have ovarian trouble before her marriage, some seven years ago. Since marriage, the ovarian pains and pains down the left leg have become more and more severe, rendering her a confirmed invalid. There is dyspareunia and an absence of all sexual desire. The pelvis is shallow and the uterus low down in the pelvis. On examination a small, olive-shaped body is felt in Douglas' fossa. The left ovary can not be detected in its normal place, while the right organ is easily recognized where it should be.

Pressure on the body in the posterior cul-de-sac gives exquisite pain and almost causes fainting.

The diagnosis was chronic oöphoritis with displacement downward. The treatment suggested was excision of the organ, as every form of medical and surgical effort had failed to give the slightest benefit. The patient readily agreed to the proposal,

and the operation was performed on the 29th of January, 1876. The cul-de-sac was brought into view by a Sims' speculum, and the posterior wall of the vagina divided longitudinally to the extent of about three-quarters of an inch. The peritoneum covering the ovary was then divided, and the organ brought out through the incision, external to the vulva, and separated by the scissors after ligating its ligament with hempen thread (carbolized).* The wound healed without difficulty, and the patient made an excellent recovery. At no time was it necessary to use a catheter, and the temperature did not exceed 99.5°, while the pulse never ranged beyond 88.

So far as relieving the patient's sufferings, the operation did not succeed. The result, however, should not deter from the future performance of the operation in a similar case, as the long persistence of the inflammation of the organ had very probably induced a pathological condition of the nerve which might be avoided by an earlier resort to the knife.—*Canada Lancet.*

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

The Central Kentucky Medical Association.

The Association met at Stanford, Ky., in the Grange Hall, on the 18th of October, 1876, at 10 A. M., the President, Dr. A. D. Price, of Harrodsburg, in the chair. Present—Drs. Logan, Alcorn, H. Brown, McMurtry, W. A. Brown, Neet, Johnstone, Harlan, Craig, J. L. Price, McRoberts, McKee, Bailey, Bronaugh, Carpenter, Reid, Burdett, Evans, Dunlap, Boren, Trueheart, Grimes, Cowan, Erwin, Huffman, and R. C. Brandeis, of Louisville.

The opening paper on "Phthisis Pulmonalis, its Diagnosis, Pathology, and Treatment; the latter with Special Reference to

* There were no folds of small intestine in the cul-de-sac in either this or the preceding case.

Climatology," the question for the day, was read by Dr. A. R. McKee, of Danville.

The subject for discussion to-day, he said, embraces so large a field that it would be impossible, within the limits assigned him, to do more than to consider very briefly a few of the most important phases of the disease. Necessarily, much of great interest in connection with phthisis would have to be omitted on this account. Taking up the pathology of phthisis, he said it necessarily included the pathology of tubercle, and going back to the times of Laænnec and his immediate followers, he gave the theory advocated by them, and which was generally received by the Profession until microscopical investigations of late years, mainly prosecuted by the Germans, unsettled many points in the pathology of phthisis, and they still remain undecided, The theories of the present day, and more particularly those of Neimeyer and Rindfleisch, were then given in full, after which he spoke of some of the most frequent complications of the disease, summing up with the statement that whilst the essential lesions of phthisis pulmonalis are found in the lungs in a large percentage of cases, the immediate cause of death proceeds from other organs, as the bowels, brain, liver, kidneys, etc., etc.

In considering the treatment and climatology of phthisis, he alluded to the impropriety of consumptives procreating, and said that the proper management of the children of scrofulous and consumptive parentage would do much in many cases to overcome the inherited taint. They should be well clothed and fed, and have abundant fresh air. The disease, he believed, either when acquired or hereditary, could be broken up in a number of instances by rigid observance of hygiene. Well-cooked and the most nutritious food is at all times indispensable in treating consumption, and it should be the special endeavor of the medical attendant to keep the functions of the digestive organs in a healthy condition. The importance of fresh air in all stages of the disease could not be overestimated, as without it all other means will fail. In regard to the climatology, he spoke of the action of a warm climate in promoting the activity of all the functions of the body, which would explain the benefit derived in many instances from such a climate by con-

sumptives. The capillaries were excited to increased action, thus relieving internal congestions, and the respiration of warm air was soothing to the lungs. The change of scene and place may also prove beneficial. On the other hand, the discomforts and inconveniences of a removal from the pleasant surroundings of home must not be overlooked. Of the various resorts recommended for the subjects of phthisis, he favored the south of France and Italy and Madeira, abroad, and in this country the Southern States, and particularly the interior of Georgia and Florida. Summer residence in mountainous regions, accompanied by out-door sports, a sea-voyage, judicious changing from place to place, in fine, any pursuit that tended to keep the patient in the open air, he regarded as the most reliable means for the successful treatment of the disease.

The plan of congregating consumptives in sanitaria and hospitals he looked upon with disfavor, as the depressing influences of such associations, he thought, must result in harm. In conclusion, he related the case of a young lady in advanced stage of phthisis, as told him by her relative, who was cured by an extended sojourn on the plains, stating that he had seen other cases restored by a life on the plains, and asserting his firm belief in the superior efficacy of such a life as a curative agent in the treatment of phthisis.

Allusion was made to cod-liver oil, alcoholic stimulants, the hypophosphites, the pancreatic emulsion, and extract of malt, which, he said, when given with proper discrimination and judgment, would be followed by good results.

Dr. Brown, of Hustonville, said the paper had presented very comprehensively the generally-accepted theories of phthisis, and he had nothing to add to them, but he was particularly interested in Dr. McKee's remarks on the climatology of the disease, as they had reminded him of two cases of confirmed phthisis occurring during the late war in a cavalry regiment of which he was medical officer. He had endeavored to dissuade these men from entering the service, but notwithstanding the rough usage of soldiers' life, and with no treatment, save alcoholic stimulants freely, and with nothing but soldiers' fare, they after a while began to improve, and soon all signs of the dis-

ease disappeared in both. In one they never returned, as he is in good health to-day; the other, however, upon resuming his previous life, soon began to have hæmorrhage from the lungs.

Dr. Logan, of Stanford, after alluding to the difference between phthisis and tuberculosis, remarked that in enumerating the remedies applicable to the treatment of phthisis, Dr. McKee had omitted mention of quinine, which was of great value in combating the symptomatic fever, one of the most distressing symptoms of the disease. He also spoke of the value of chemical food in the diet of consumptives.

Dr. McMurtry, of Danville, after referring to certain articles of Dr. C. Theodore Williams, of London, upon the climatology of phthisis pulmonalis, said that the subject of *climato-therapeutics* must be regarded as yet in an undeveloped state. While the various stages of phthisis have been assigned to certain regions of the old world as peculiarly suited to them, the whole matter remained in a very undetermined condition on our continent. With us patients are too frequently advised to seek a restoration of health by resorting to various mountainous regions of the Western States, and to Florida, without sufficient discrimination.

The most desirable qualities in the selection of a climate he considered to be freedom from moisture; from sudden and excessive variations of temperature, together with a moderate average temperature. In fact, he said it is all important that the climate be such that the patient may spend the greater portion of the time in the open air, without suffering from cold or heat. So far as he had been able to ascertain, the nearest approach to these requirements upon our continent, he believed, could be obtained upon the high plateau surrounding the city of Mexico, in some portions of Southwestern Texas, and in New Mexico. Prominent in the consideration of a suitable resort for consumptives was the necessity for good food. With this class of patients he believed alimentation to be of the greatest importance, and no climate could be considered suitable for them without abundant and skillfully-prepared food.

Some instances of remarkable recoveries from consumption, after the disease had reached an advanced stage, and with ex-

tensive vomicæ existing, had been brought forward during the discussion; and on this point he wished to say that he was a firm believer in the curability of phthisis in certain stages, as he had seen, with some of the members present, post-mortem appearances which gave indubitable evidence of permanent repair in instances where lesions had been known to exist, but they had always occurred in the young and robust, and before extensive breaking down, or tubercular infiltration of the lung tissue had taken place. He said, whenever large cavities have been formed, lined with a pyogenic membrane, and accompanied with extensive tubercular infiltration, he did not believe recovery ever took place; on the contrary, the patient goes steadily down. He did not think the case of remarkable recovery mentioned by the first speaker, as reported to him by a layman, could be reasonably considered one of advanced stage of consumption. In his opinion, if the gentleman had made a thorough physical examination of the patient himself, he would not have reported it as such. Want of time, he said, would debar him from entering into any discussion of the pathology, a most important division of the disease, and he would close his remarks by directing attention to what he considered a valuable remedy, namely, arsenic, in the treatment of phthisis, and particularly in the early stages. He could not explain exactly its mode of action, but it had proved to be a very useful and reliable remedy. The first reference to it in this connection that he had seen was in "Jaccoud's Clinical Lectures," and it is now in very general use among the French in treating phthisis.

Dr. Burdett, of Lancaster, regarded phthisis as curable, and agreed with Dr. McMurtry as to the efficacy of arsenic in the treatment. He had seen much benefit result from its use. Quinine, he thought, did more harm than good. He referred to the necessity of improving the disordered digestion in consumptives, and dwelt at some length on the climatology, of which he did not have a high opinion. He related his experience of Florida as a health resort, and proffered some advice to those who go there in search of health.

Dr. Brandeis being invited by the Chair to participate in the

discussion, expressed his thanks, and also the interest and pleasure he had derived from the paper Dr. McKee had read. After particularizing the essential differences between phthisis and tuberculosis, he alluded to the use of rarified air, so common with the Germans in the treatment of phthisis, and explained at length its mode of action, giving afterwards a description on the black-board of the apparatus used for the purpose of rarifying air.

Dr. Johnstone, of Danville, said, of the two theories concerning the origin of the caseous masses now in vogue, the one which had been so clearly set forth by two of the preceding speakers was the most fashionable, but the one which seemed most plausible to him was the old "tubercular" theory of Laænnec, modified by Rindfleisch and his co-workers. Allusion was made to the catarrhal theory which Neimeyer had brought so prominently before the Profession, when he made a drawing on the black-board of Stricker's diagram of the pulmonary lobule, and pointed out the method by which the sharp angles of the parenchyma between the alveoli became inoculated by the scrofulous secretions from the bronchioles, and the way in which the particles of this secretion act as irritants, and thus become the centres for tubercular formation. After demonstrating that the "Carswell Grapes" were the inflamed angles, which projected into the acini, he then clearly showed how the lateral extension of the inflammation caused catarrhal pneumonia, as well as inflammation of the peri-bronchial and peri-vascular tissues. He said the products of this inflammation obstruct the vessels, and by diminishing the blood supply set up that series of retrograde changes resulting in the caseous masses previously alluded to. The opinion expressed by one of the speakers who had preceded him, that large cavities never or rarely healed, was directly in conflict with Rindfleisch, who states that when they are too large to be closed by cicatricial contraction, they were sometimes lined with a membrane resembling the mucous, and that they remained in the lung, as bronchiectatic dilatations do, for an indefinite period.

Two considerations, he said, should decide us in selecting a

climate for consumptives; a small and gradual variation in the yearly temperature and an absence of moisture.

Dr. Neet, of Richmond, would like to have said something on the pathology of phthisis, but the discussion had been so prolonged that he would confine himself to a few remarks on the treatment. Beginning with the diet, upon which he laid special stress, he said patients with phthisis should eat at least six times a day, and *always* on going to bed. The food taken should be in small quantities. Raw meat (scraped) with as much of the fibrin and fat as possible twice a day, to be followed by some alcoholic stimulant, as brandy, and between meals and at night bread and milk. A nitrogenized diet, he said, is well borne by them. A buckskin jacket must be worn from October to May, and the whole surface of the body well oiled every day. In the bronchitic form of the disease, he said, nitric acid in combination with iodide of potash will be found beneficial in checking secretion and the spasmodic cough. The cough was (1) reflex from pleuritic adhesion; (2) reflex from pressure of bronchial glands on the recurrent nerve; (3) due to deposit of tubercles in the laryngeal mucous membrane; (4) to excoriation by the irritating discharge from a vomica; (5) to an accumulation of mucus in the air passages. Chloral is also an excellent remedy for this cough, and to disinfect the discharge from the vomica, carbolic acid should be given daily. Quinine alone, he said, would often fail to allay the fever, but that a cold sponge bath in the morning, followed by thirty grains of quinine at 8 A. M., would frequently prevent the afternoon exacerbation The diarrhœa of phthisis, he thought, might arise (1) from the mucous membrane of the small intestines partaking of the general hyperæmia often present in the abdominal viscera in the prodromal stage of phthisis; (2) from deposit of tubercle, followed by ulceration of the intestinal glands; (3) passive congestion of the small intestines due to fatty infiltration of the liver; and (4) to venous congestion due to obstructed pulmonary circulation by wasting and contraction of lung tissue. The treatment in each instance, he said, must be addressed to the cause. For the relief of the pleuritic pain he regarded dry-cupping as the most effectual.

Dr. R. C. Brandeis, by request, delivered an address on the subject of Ozæna. After describing the anatomy of the nasal passages with the aid of diagrams, he spoke of the etiology of the disease, and said, that of 87 cases coming under his observation none of them gave any evidence of a specific taint, and he therefore did not believe the affection was due to either syphilis or scrofula, but to a chronic infiltration of the sphenoid cells. In the treatment he advocated as of the first necessity the most *rigid cleanliness*, and this, he said, was best effected with the vaginal douche, always using medicated water. The affected parts, he said, would not bear pure water. Owing to the smallness of the stream projected from the nasal douche, it would not reach the diseased parts, and was therefore useless for this purpose. For a wash he preferred the chlorate of potash—10 grains to the ounce of water; and as a curative means he relied on nitrate of silver in stick, or if this be impracticable for want of a speculum, then in powder combined with talcum. Internally he gave carbonate of ammonia, but he did not believe internal medication exerted much influence in curing ozæna.

Dr. Logan, chairman of the Section on Progress of Midwifery, Gynæcology and Diseases of Children, read his report. This was an admirable review of the progress made in these branches within the last year, and was the fullest and most comprehensive report yet presented on this section.

Dr. Neet reported a case of Malignant Tumor of the Brain with remarks. This case occurred in a well-to-do farmer aged 32 years, and presented some features of unusual interest. He was first seen by the reporter early in last June, who found him suffering with a constant sharp burning, and lancinating deep-seated pain in the left side of the head. He was badly nourished, cachectic, and his countenance worn and haggard. His appetite was poor; bowels sluggish; urine normal, with an indisposition on the part of the detensor muscles to act. The sub-paralytic state of the muscles concerned in the production of peristalsis and micturition, he thought, was more probably due to the benumbing effects of the narcotic (these being in constant use to bring rest and sleep) than to any loss of functional power resulting from a lesion. Pulse 100; temperature 99 2-5°. Left

eyeball somewhat protruded, with partial ptosis; pupil dilated some, and slow in action. There was also paresis of the inferior oblique and external rectus muscles, causing slight converging strabismus, with disturbance of vision and diplopia of recent occurrence, smell and taste impaired; hypoglossal and glosso-pharyngeal muscles partially paralyzed, rendering articulation and deglutition imperfect. Vomiting had not been a prominent symptom. The glands on the left side of the neck had formed a large mass of stony hardness, and those on the right side were also infiltrated. There was severe pain of a neuralgic character on the left side with muscular contractions. Hearing impaired in both ears; in the left 2.36, in the right 10.36. Membrana perfect in continuity, but somewhat congested, with slight purulent discharge from the external auditory canal of the left ear, and puffy swelling, with heat over the mastoid. There was no paralysis on the right side of the face, nor any disturbance of vision. Neither was there any paralysis of the spinal nerves. The skin on the left face was of a purplish hue, due in part to the interference of return circulation by pressure of the enlarged glands, and to the change in the blood vessels by the local applications. Heart and lungs normal, except a faint sign of deposit in right apex. The previous history of patient showed that he had been all his life singularly free from disease (having escaped most of the ills incident to child-hood) until about a year previous he had a fall from his house, striking his head, causing complete unconsciousness for some twelve hours. He began soon after to suffer with headache, which continued with more or less severity until the following February, when the pain, which was before general, became localized, and referred to the left head about the tempero-maxillary juncture. Medical advice was now sought, and a diagnosis made of scrofula, with acute otitis, and neuralgia of the trigeminus. All sorts of medication were then resorted to internally and externally. The ear was probed with a knitting needle and filled with "ear-drops"; cundurango and "pain-killer," with other drugs given internally, and tincture iodine, mercurial ointment, croton oil, etc., applied to the enlarged glands, until at last a mixture of the stronger ammonia water,

alcohol and spirits of camphor, "heated to the boiling point," was *poured into his ear*. Diffuse inflammation of the external auditory canal followed this application, with a discharge of pus, and a steady increase in the severity of all the symptoms. His general health gave way, and the intense pain was only relieved by the constant use of narcotics, and he soon after came under the care of Dr. Neet.

At his visit on the next day the patient was delirious, pulse 110, temperature 102°, and the indications pointing to an extension of the inflammation to the mastoid cells. An incision was made to the mastoid bone, and the opening kept clean. In a few days the temperature and pulse became normal. Suspecting, from all the signs, the existence of a tumor, he passed his finger behind and above the hanging palate, and a growth was detected the size of a pigeon's egg, seemingly attached to the left wing of the sphenoid bone. It was characteristically hard, slightly ulcerated, and discharging purulent matter. The personal and family history of the man was then inquired into. He had never drank, and denied any syphilitic infection, but the evidence of malignant taint in the family was conflicting. Treatment was begun with iodide of potash to test the question of syphilis, together with tonics, good food, and morphia subcutaneously. All the symptoms of iodism appeared in about ten days without any change in his condition whatever, and the malignant nature of the growth was at once made known. The case was then seen by Dr. McMurtry, of Danville, and some days after by Dr. Dudley, of Lexington, both of whom confirmed the diagnosis. The patient grew rapidly worse from this on. The paralysis extended until he became nearly blind, and he could with difficulty swallow fluids. Death occurred on the 10th of August, three months from the date of the first visit. No post-mortem was allowed.

A very interesting and instructive summary of the nature of malignant growths of the brain and their manifestations, followed the report.

Dr. McMurtry said the case was one of considerable interest to him, viewed in all its aspects, and he was glad it had been reported. Owing to the "heroic" course of treatment pursued

previous to Dr. Neet's taking charge of it, of which he thought too brief an account had been given, the diagnosis was necessarily veiled in great obscurity, but Dr. Neet had very skillfully and promptly interpreted the symptoms. The case, he said, brought to light very vividly one fact—to-wit., the appalling and highly culpable ignorance to be met with at times in the ranks of the profession. Happily, he could say such instances as this were not frequent, at least so far as his observation extended. Dr. N.'s remarks on the case, which followed the report, and on the nature of malignant cerebral growths in general, he thought, were highly instructive, and showed a thorough familiarity with the whole subject.

Dr. Dunlap, of Danville read a paper on Typho-Malarial Fever, with Cases.

Dr. Alcorn reported a case of Acute Rheumatism treated with salicylic acid. This was a typical case of acute rheumatism cured within three days by salicylic acid, after the other ordinary remedies had failed.

Dr. Cowan, of Danville, exhibited specimens of medicated gelatine block, chloral in pill, and other varieties of medicated preparations from the French, and an intra-uterine tenaculum forceps.

Dr. McMurtry exhibited Allis' ether inhaler, Charriéré's perforated needle, and Wagner's "Manual of General Pathology."

Dr. Logan exhibited a pneumatic repositor, a variety of pessaries, and photographs of a case of extensive tumor of the eye.

The committee on questions announced as the subject for debate at the next meeting "Ether and Chloroform, their Comparative Merits as Anæsthetics, and the best Mode of Administration," and Dr. Neet was appointed to open the discussion.

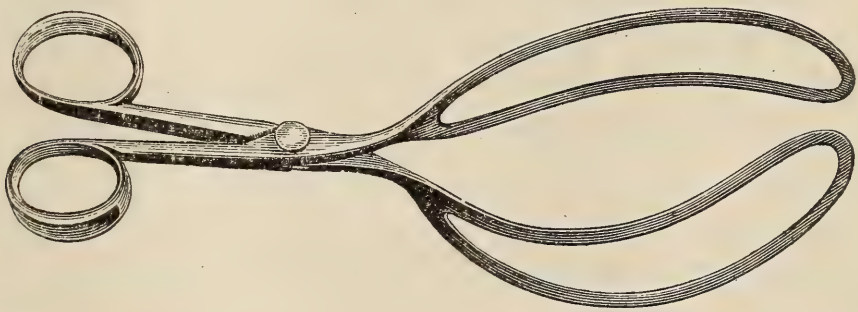
After the usual vote of thanks, the Association adjourned at 4 P. M., to meet in Danville on the third Wednesday in January, 1877, at 10 A. M.

GEO. T. ERWIN, M. D.,
Permanent Secretary.

Colorado Medical Society.

Light Obstetric Forceps—Synopsis of Remarks Made before the Colorado Medical Society, June, 1875. By W. H. NEWMAN, M. D., Denver.

Let it be well understood that this instrument is not intended as a substitute for the ordinary obstetric forceps. With a tractive power of forty or fifty pounds, it can be used to *assist* the woman in her efforts to deliver herself. It is for use in slow cases, where it is wished to disengage the head from the inferior strait, or to lift the head from the perineum. Its use is limited to those cases where the head rests upon the perineum, or at most is in the inferior strait.



It is so small that it can be easily carried in the pocket, its entire length being but nine and three-fourth inches; the length of the handles to the lock is three inches; the length of shank from lock to curve is one and a quarter inches; the blades are uniformly one and a half inches wide, and one-sixteenth of an inch in thickness; the fenestra the same as Hodges'; the cord of the arc represented by the head-curve is six inches in length; the entire weight three ounces.

With the thumb and two fingers this instrument is manipulated, the thumb is placed in one ring, the second finger in the second, and the first or index-finger in front of the second ring. The index-finger can thus be used to guard the vulva, to keep the blades properly locked, and to assist, when necessary, the thumb and second finger in the traction.

It is impossible to do harm with this instrument either to the mother or the child. No operation in obstetrics, not even uncomplicated catheterization, is as simple as its application, which can absolutely be done without the knowledge of the

patient. The patient may occupy almost any position, and the handles being short and light, it is not necessary to hold to or support them between the pains.

Although a few physicians may be in the habit of using the forceps in a tolerably large proportion of even their slow cases, it is not taught, as a rule, either in the schools or in the books, that forceps are to be used to assist Nature, but only where Nature fails. The forceps and the modifications which have descended from the Chamberlains have a power absolutely necessary, and for which these are in nowise offered as a substitute; but there would seem to be no half-way grounds between the forceps in common use and those now submitted. We either want forceps strong enough for cases the most difficult, or so small that they can be used without ceremony or note of alarm. Necessity demands the forceps in common use; humanity and convenience are represented by the forceps before you.

If objection be made to the tenuity and lack of strength of this instrument, the intent and the scope of the meaning of their introduction must be totally oblivionized. It is no part of the philosophy of these forceps that they be used as an extractive, extraneous power to deliver by force, as with the ordinary forceps, but as a safe and convenient adjuvant of the woman's efforts to deliver herself. We have, perhaps all of us, sat for hours by the bedside conscious that if we could apply but a little timely assistance we would, in many cases, prevent much suffering and anxiety. To prevent this delay, with its disagreeable or possibly evil consequences, is the hiatus in obstetric practice that this little instrument is intended to supply.

These forceps are manufactured in elegant style by J. H. Gemrig, No. 109 South Eighth Street, Philadelphia, and by Geo. Tiemann & Co., No. 67 Chatham Street, New York.

Note.—Notwithstanding these forceps have been invented and have been for sale by Tiemann, of New York, and Gemrig, of Philadelphia, for more than a year, they have not been accepted by the Profession. Physicians will continue to regard them merely as light obstetric forceps, and much too light for use in forceps cases. They do not understand that they are not for forceps cases proper, but that they are designed for a different field altogether, for a field not hitherto occupied by forceps, except when in a few cases the ordinary

forceps have almost, without authority, obtruded themselves into this field.

Having used these forceps since their introduction in about thirty-four cases, more than half of all the cases attended, the author feels fully convinced that the *idea* must be accepted by the Profession. As to the mechanism of the instrument presented, it is believed that this can not now be improved. To larger forceps, forceps intended for very difficult cases, a better lock and better handles could be applied, but for such short and light forceps the button-lock and scissors-handles are probably the best.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—*Intussusceptio Recti in Pregnancy.* By B. E. HADRA, M. D., Austin, Texas.

It is well known that intussusception of the rectum is not an unfrequent cause of ailments in children, which more or less resemble chronic dysentery. Adults, too, it seems to me, are subject to it more frequently than is generally believed. The digital examination of this organ is so uninviting and disagreeable to both patient and physician, that it is almost invariably neglected, to the serious detriment of the patient. So a note stating whether or not the rectum was examined would have been of much interest to the readers of an article which appeared in one of our best journals (I can not now find the article in question, but am inclined to believe that the "American Journal" had it), an article where, in case of chronic dysentery, the position on the back, with the head lowered and legs elevated, is recommended. There can not be any other reasonable explanation for the modus operandi of such a position but the assumption of a laxation or intussusception of the rectum and the mechanical redressment of it by the weight of the intussuscepted part itself.

In pregnant women intussusception occurs often enough, judging from my past experience, and it certainly merits a greater share of attention than most of our text-books bestow upon it. There is no doubt but that those long-standing obsti-

pations, so common in pregnancy, as well as the direct pressure exerted by the gravid womb upon the rectum in the direction of the sacrum, are apt to produce such occurrences. A circular part of the rectum might get paralyzed and easily intussuscepted into the lower portion, or a sound portion into a softened and relaxed one whenever a stronger effort for defecation is made.

An enumeration and description of all the cases that have come under my observation would be of no use in this place, since all cases more or less offer the same features. I will therefore confine myself to the history of two characteristic cases only.

Case I.—Mrs. S., about thirty years old, robust and with a very well developed pelvis, pregnant for the fifth time, and in the fourth month. Since four weeks a constant tenesmus recti; nearly every half an hour a small, slimy, bloody-tinged stool, sometimes containing pure blood, mostly without real fæcal matter. No fever; hardly any colical pain; pressure over the abdomen not painful; all internal medication powerless, enematas of starch and opium of very little effect. Patient had suffered in the previous period of gestation in the very same way; did not get any relief from any medical treatment, but got well in childbed. An examination of the rectum reveals about $1\frac{1}{2}''$ above the anus a circular fold hanging down, and which can be pushed away at any point from the rectal wall. This was clearly an intussuscepted piece of the rectum, above which from the vagina a good deal of hard fæcal matter could be felt. Ordered full doses of castor oil, and cold-water injections by a Davidson's syringe, used with much power and to such an extent as could be borne two or three times a day. Very copious stools followed, the patient improved perceptibly, and a full cure was effected in about a week. No labor pains were excited and further pregnancy went on normally.

Case II.—Mrs. C., stout person, twenty years of age. Saw her five days after her first confinement. She complained of a diarrhœa which had already lasted for some months, and could not be relieved. Stools essentially the same as those described in Case I. Examination of the rectum by the finger reveals a lax

unilateral fold in the rectum, easily reached. Treatment same as in Case I; quick recovery. Here the intussusception never was complete; or, what is more probable still, it was already partially redressed after the womb was emptied.

A few words will express all concerning the symptomatology of this ailment. Stools very frequent, small, slimy and more or less admixed with blood; uncontrollable by internal medication; absence of fever; tenesmus, etc., are the features easily understood; the general condition not much impaired; necrosis of the intussuscepted piece does not seem to occur. The lubricity and physiological hyperæmia which exists during pregnancy seem to prevent it. Judging from my cases, I am inclined to believe that women with very wide pelves are the most liable to this condition; it might be that the womb under such circumstances is more movable and inclined to get retroverted, and hence to press in the direction of the sacrum, especially the promontorium.

As regards the treatment, the principal thing is to bring on veritable defecation, the diarrhœa present being a diarrhœa paradoxa, the stools consisting solely of mucus and blood. Cold injections, made with considerable force and large in quantity, act as an astringent, as well as in a mechanical way by lifting up the intussuscepted portion. Pumping in air might probably answer the purpose as well, but as I have never yet seen any deleterious effect whatever upon the progress of pregnancy from cold water injections, I for one would prefer them, for the additional reasons that they are much more easily to be had, and that they have a cooling and contracting effect upon the involved parts.

ART. II.—*A Successful Case of Gastrostomy.*

At the meeting of the Académie de Médicine, in Paris, on October 24th, M. Verneuil reported the first really successful case of gastrostomy that has yet been recorded. M. Verneuil stated that the operation had previously been performed fifteen times for simple and malignant strictures of the œsophagus,

but had always been followed by death. Dr. Pooley, of Ohio, however, has collected eighteen cases, in one of which the patient lived thirteen days after the operation. M. Verneuil's patient, a boy seventeen years of age, swallowed by mistake a solution of caustic potash, on February 4, 1876. For two weeks he suffered from the symptoms of an acute œsophagitis, after recovering from which he had great difficulty in swallowing. This difficulty constantly increased, and on May 24th, he was admitted to M. Verneuil's ward at the Pitié. He was then exceedingly emaciated, could scarcely swallow anything, and was almost dying of starvation. Catheterism revealed an impassable stricture, two and three-quarter inches below the upper orifice of the œsophagus. External œsophagotomy was consequently out of the question. The patient was fed per rectum, and futile efforts to pass the stricture were repeatedly made. One day the patient stated that he could swallow a little fluid at night, although deglutition was absolutely impossible during the day. Convinced by this fact that there was muscular spasm in addition to cicatricial stricture of the œsophagus, M. Verneuil administered to the patient two drachms of chloral per rectum, and as soon as the narcotism was complete, the stomach-tube was passed through the stricture without much difficulty. Although the passage of the catheter caused intense pain, the patient was, for some days afterwards, able to swallow bouillon and pap. The catheterism was repeated every second day until July 10th, when the stricture again became impassable. The patient after this rapidly became weaker in spite of the nutritive enemata, and finally gastrostomy was determined on, as there was danger of death from inanition.

On July 26th, he was placed under the influence of chloroform, and oblique incision about two inches in length was made parallel to the cartilaginous border of the false ribs. The skin, subcutaneous cellular tissue, muscles, and peritoneum were successively divided, and then the stomach presented itself in the gaping wound. This organ was at once transfixed and held in the wound by two long acupuncture needles, and this was done so rapidly that the abdominal cavity was not exposed to the air for more than fifteen or twenty seconds. Fourteen metallic

sutures were then passed through the skin, parietal peritoneum, and wall of the stomach; the sutures were about one-quarter of an inch apart, and were twisted over a tube of lead and a button. The acupuncture needles were then withdrawn, and a small incision made through the wall of the stomach, which had by that time assumed a purplish color in consequence of the constriction by the sutures. The wall was remarkably thick, much more so than it usually is in the cadaver. Two small jets of blood followed the incision, but they were immediately controlled by the application of hæmostatic forceps, which were left in position until the evening. The incision was not more than one-third of an inch in extent, just large enough to admit a large gum catheter, which was secured in position by tapes and collodion applied over the abdomen. While applying the sutures the parietal layer of the peritoneum was secured by a dozen or more pairs of hæmostatic forceps, which were left on until all the sutures were in place. The operation was exceedingly simple, and was attended by no untoward accident. The antiseptic method was strictly followed, all the instruments, etc., having been steeped in a solution of carbolic acid, and a carbolized spray kept constantly playing on the wound. For some days subsequent to the operation the patient complained of circumscribed pains in the left hypochondrium and right shoulder, and of oppression of breathing from the collodion, and he became jaundiced. There was no fever, however. The sutures fell out spontaneously, and a small portion of the gastric wall, included between the sutures, sloughed so that the opening became larger than at first. The patient was fed through the catheter with bouillon, soups, milk, eggs, wine, etc., etc. On August 20th he was able to get up, and on September 10th the fistula was rounded and encircled by a border of mucous membrane. He had then completely regained his strength and energy. On August 18th he weighed seventy-five pounds, and on September 14th he weighed eighty-six pounds. He experiences hunger and feeds himself with all sorts of food. After injecting this food the flow of saliva is increased, but as the stricture of the œsophagus remains impassable he is obliged to spit it out. It is probable that in course of time the

cavity of the œsophagus will be completely obliterated, and the patient will consequently be obliged to feed himself through his gastric fistula during his entire life.—*Gaz. Medicale de Paris.*

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

A VERY REMARKABLE CASE.

CHIHUAHUA, MEXICO, November, 1876.

Dr. E. S. Gaillard:

Dear Doctor,—Your Journals reach me regularly, and thinking that a few lines from this land of revolutions and liberal fees may interest your readers, I send a report of a remarkable case of congenital elephantiasis of the foot: The parents of the child are healthy, the family history presenting nothing of interest. The little girl was born with the great, second and third toes very much hypertrophied; the fourth or small toes are developed, but much smaller than natural. The second and third toes are grown together, except at their ungual extremities, where they separate. The hypertrophied tissues extend as far as the heel on the plantar surface, being thickest at the toes, and gradually becoming thinner as it approaches the heel. On the dorsum of the foot it is the same, the hypertrophied tissues ceasing at the tibio-tarsal articulation; owing to the weight of the foot, the flexor and extensor muscles of the leg are much more largely developed than those of its fellow; the muscles of the thigh are likewise largely developed. The skin and subcutaneous areolar tissue were not hypertrophied above the ankle joints.

She could walk and run perfectly well, but was "puny," the foot no doubt being a drain to the system; the nails were grown into the flesh; the foot perspired a great deal and kept the joints and folds of the skin constantly irritated. The little girl, though only six and a half years old, was anxious to have the foot amputated, and she was brought to me from a distance for that purpose six months before the operation was performed.

I then suggested amputation, as the foot was growing greatly out of proportion to the child's body. The Mexican physicians called into consultation objected to the operation on account of her age. Of course, I could do nothing but suggest that the foot should be kept perfectly clean, and put her on iron, as she was very spanæmic. Six months later Dr. L. Hudspeth, of Texas, visited this place, and I sent for the child. Her health had not improved; she was thinner than when I first saw her, and the foot had grown notably. The Doctor agreed with me that the foot ought to be amputated, and we at once performed the operation, amputating just above the ankle joint, as the tissues were hypertrophied just far enough to prevent Symes' operation. She made a good recovery, and when discharged looked better.

The foot weighed five pounds; length from heel to end of great toe eighteen inches; from heel to instep twelve inches; length of great toe from met. art. eight inches; of second and third toes from met. art. to end six inches; round metatarsal bones seventeen inches; round tarsal bones sixteen inches; from malleoli to malleoli twelve inches. Truly yours,

F. Paschal, M. D.

Lutherville, Md., Nov. 6, 1876.

Dr. E. S. Gaillard:

Dear Sir,—I should be glad to submit the history of the following case to the readers of the "Richmond and Louisville Medical Journal," and to have the views of some of my professional brethren expressed with regard to it.

Charlie R., twelve years of age; had enjoyed good health up to about the 1st of November, 1875, when he complained of constant headache, constipation and sickness of stomach. This last symptom was soon relieved, but the headache continued steadily in spite of all remedial agents which were tried. He has not had anything like a chill, but has a tendency to perspire during the early part of each night. Upon inquiry I learned that his aunt died of pulmonary phthisis, and that one of his sisters had suffered from "threatened spinal curvature."

I examined his lungs, but could detect nothing wrong there. On November 27th, his symptoms were severe headache, confined to the upper and front part of the head, which was not affected by pressure made over the supra orbital foramina; eyes quite sensitive to light; pain in the back along the spinous processes from the fifth cervical to the upper lumbar vertebræ; tenderness over the whole abdomen, with slight fullness; on drawing the nail across the skin of the abdomen, a well-marked tache was produced; bowels only move when assisted by aperients; has lost two and a half pounds in weight in the last few weeks, and has no relish for food; tongue clean; skin dry; pulse 92; temperature 99½°. In the past week he has taken over one hundred grains of quinine, also ten grains bromide of potassium with fluid extract of gelsemium three times a day. The headache and pain in the back having now lasted over four weeks, and the boy's mother becoming very anxious in regard to his condition, she asked me to tell her exactly what I thought of the case. I replied that to me the symptoms pointed toward incipient tubercular meningitis. In the afternoon of the same day Dr. P. C. Williams, of Baltimore, saw the case in consultation, and agreed with me in regard to the opinion I had expressed. The same treatment was continued with the addition of Fougera's iodinized cod-liver oil.

After this another physician saw the patient, and pronounced the disease typhoid fever, and later on typho-malarial. He returned to the quinine treatment, but continued the cod-liver oil and nutritious diet; three grains of quinine were given every third hour, until over one hundred and twenty were taken before any toxic effects were produced, but the headache and spinal pain remained the same. The temperature of the body on December 2d reached 102°, which was the highest point, the pulse being at the same time only 76 per minute. The character of the pulse was peculiar, the number of beats increasing or diminishing in a very short space of time without the patient moving. December 20th he was sitting up, and said he was able to walk across the room by holding on to the back of a chair. He still complained of pain in the head and back, but thinks he is a little stronger. Pulse 90; temperature 98 4-5°

Since the above was written the boy has returned to his usual state of health, and I have received the credit of being entirely mistaken with regard to diagnosis.

Now, sir, if any of the many readers of your Journal have had similar cases, or can satisfactorily explain the cause of the above train of symptoms, I shall be very glad to hear their opinion expressed. Very respectfully yours,

THOMAS C. PEEBLES, M. D.

ARTESIA, MISS., November, 1876.

Dr. E. S. Gaillard.

Dear Doctor,—To the country physician a rainy evening during this season of the year is, at times, a "God-send." Assuredly is this true if he feels the sweet consciousness that in the year now drawing to a close he has in the practice of his profession been instrumental in the lessening of human suffering and accomplished some few of those things which are accounted laudable and good; if he is esteemed and confided in by his neighbors and has been even partially remunerated for his services; if the crickets chirp lively about the house; if the great log-fire blazes brightly on the old-fashioned hearth, and there is no prospect of his being called to brave the inclement weather and see a croupy baby some five miles distant from his office. True, such occasions are rare, but their very rarity renders them the more enjoyable. It is a fit time to retrospect the past year and to feel happy. For now its failures are forgotten and its sad scenes overlooked, while its successes are recounted and its pleasing reminiscences revived and reappreciated. So after all, it is not so disagreeable a thing to be a physician—even an humble country physician.

The writer trusts, dear doctor, that you will be considerate and pardon the above-written paragraph. It is unadorned with glittering technicalities judiciously selected from the archives of medical lore; strictly speaking, it is unprofessional. But since we are nearing the Christmas holidays, and many of us will be called to mingle with our friends at the festive board or join in happy reunions around the old family hearth-stone, may it not be well for a physician to put off the stiffly-starched gar-

ments of professional dignity and appear in society clothed as one of the people?

Shut indoors by a rainy evening and entertaining feelings as above expressed, bear with me while some facts are given showing one side of the southern negro's character as viewed from a medical stand-point: Among this unfortunate people, a people whose destiny is the unknown quantity in the great political problem now undergoing solution, there have risen up many colored doctors. There are those who call themselves "herb doctors," others who rejoice and prosper under the name of "conjure doctors," and so on through a long list. It is a rare exception to meet one of these aspirants to professional honors who is not illiterate; unexceptionably, they are ignorant and superstitious. Their teachings have none other than a demoralizing effect on the common plantation negro.

Imagine you see a young robust negro man in the dead hours of the night as he presses on at double quick speed through cotton fields, swamps, marshes and briar patches, on a five-mile run to consult an educated physician; see him in the "small hours of the morning," as, almost breathless, he stands before that physician's door, calling in a tone expressive of the height of excitability for "the doctor;" and now listen to his account of the awful malady that weighs down his body and threatens to crush out his very existence: Oh! his case is a desperate one; it is simply a life and death matter; on the most brittle of threads hangs his existence. His colored medical attendant has diagnosed the disease "shingles;" he has said if the eruptions "meet around the waist" death is inevitable; he has physicked the patient internally, externally, and almost constantly for weeks with different herbs, yet the shingling process is uninterrupted, and only a half inch remains to be covered, and the circuit of the waist will be completed. Hence this agonizing fear; hence this five-mile run through the darkness of night. Now witness the deluded creature's surprise and irrepressible joy when he is assured by the physician that his is only a case of psoriasis diffusa, in a simpler word, itch, and you will better realize how great a load of trouble has been rolled from his soul.

The "conjure doctor" is with the negro the most popular of professional characters. How could it be otherwise, since he is supposed to possess a knowledge of things superhuman, and to be in close communion with departed spirits, both good and evil? Lizzards, dead and living, snakes, snake-skins, etc., etc., make up his potent therapeutical armamentarium. Ignorance and superstition on the part of his patients and their admiration and awe of him are mighty auxiliaries in his work of destruction.

Imagine you see an old gray-haired negro man, bowed down with the weight of many years and all unsteady in his gait, enter a cabin in which one of his colored brethren lies prostrated by disease. As is usual on such occasions, the cabin is crowded almost to suffocation by over-officious relatives and former fellow-servants of the afflicted. The old man and "conjure doctor" ignores the presence of all present, and at once proceeds to the bedside. With his hands he strokes the prostrate man, first the head, then the face, then the shoulders, and so on down to the feet, never uttering a word, but with a dexterity of which he would be thought incapable, he shuffles a few lizzards and bundles of cast-off snake-skins from his sleeve and places them between the bedding, unobserved by any one present, all of whom are almost breathless in suspense to hear the diagnosis. The stroking process ended, he quits the bedside with a significant shake of the head and retires to an unoccupied corner of the cabin, where in a standing posture with his face to the wall he breaks forth in queer incantations intermingled with unearthly gibberish, all the while striking alternately his head and breast with his hands. This performance ended, he faces the terrified crowd and becomes communicative. He tells them he has suspected it for months, but *now* he knows it—the afflicted brother is "conjured." He tells them he is not in the habit of speaking and then not proving his speech. So the nurse is commanded to make at once another bed and have the patient removed to it. In the removal, of course, the doctor stirs up the nest of lizzards and utters a sepulchral groan as each one scampers away in quest of another hiding-place. Then he takes up the snake-skins, one by one, and holding them between thumb

and finger, at full arms-length, looks upon them with a mingled air of triumph and solemnity. Of course all present are awe-stricken, and the fame of this particular "conjure doctor" is borne abroad as on the wings of the wind.

Two questions asked, and this article is ended. May not the means employed by the "conjure doctor" be respectfully suggested to the charlatans and advertising quacks in the ranks of the regular Profession as a *dernier resort* for the satiation of their inordinate desire for notoriety?

Should not this age, being an age as it boasts itself, of universal suffrage and philanthropy, do something by way of legislation to protect ignorant humanity against the onslaughts of such merciless empirics as "herb" and "conjure doctors" and "newspaper charlatans"? With much respect,

A COUNTRY DOCTOR.

CHEMISTRY AND PHARMACY.

"Diruit, ædificat, mutat."—HOR.

Solution of Hydrobromate of Quinia for Hypodermic Injection.—The commercial "bromide of quinia" is not sufficiently soluble to make a concentrated solution for hypodermic use; and having been requested by Prof. William T. Howard to prepare such a solution, containing four grains in twenty minims, or ninety-six grains in each fluid ounce, I at first availed myself of the reäction between quinia sulphate and calcium bromide, but not being satisfied with the process, I devised the following, which has since been used with success, and gives a satisfactory result:

Take of quinia sulphate 96 grains.
Distilled water.
Diluted sulphuric acid.
Water of ammonia, and
Hydrobromic acid, of each sufficient.

Dissolve the quinia sulphate in four fluid ounces of distilled

water, with sufficient diluted sulphuric acid. Mix one hundred and fifty minims of water of ammonia with four fluid ounces of distilled water, add to the solution of quinia, constantly stirring, and transfer the whole to a muslin filter. The solution of ammonium sulphate, which passes through the filter, should be tested, and if the presence of quinia is indicated, add a little more water of ammonia to the whole of the solution and return it to the filter.

After the quinia is drained, wash with distilled water; transfer the moist magma to a tared capsule and add gradually just sufficient hydrobromic acid to dissolve it. Evaporate the solution thus obtained on a water bath until it is reduced to a transparent mass; the weight of the quinia hydrobromate is thus ascertained, while, at the same time, any excess of hydrobromic acid is driven off.

Lastly, dissolve the mass in a sufficient quantity of distilled water, so that each fluid drachm shall contain twelve grains. The resulting solution will measure about one fluid ounce.—*W. S. Thompson in Journal of Pharmacy.*

A Formula for Ergotin.—The following formula is offered by Mr. Charles L. Mitchell. He states that after numerous trials he can say that it yields a result in every way satisfactory: R. Ergot, in fine powder, ℥ viij; acetic acid, f. ℥ ij; alcohol, f. ℥ iv. Moisten the ergot with a mixture of the acid and eight fluid ounces of water; let it stand twenty-four hours; pack in percolator, and exhaust with water; evaporate to four fluid ounces, add the alcohol, let it stand several hours, filter and evaporate to an extract. Result, about 480 grains; one grain is equal to eight grains of ergot.

Croton-Oil Paint in Pelvic Cellulitis.—Dr. Charles G. Budd ("American Journal of Obstetrics") says that he has found the treatment of pelvic cellulitis by blisters, iodine, and oleate of mercury very unsatisfactory. Lately he has used, with happiest results, Corson's croton-oil paint. It is made of croton-oil, 2 drachms; strong sulphuric ether, 4 drachms; tincture of iodine, 2 drachms; iodide of potassium, 20 grains; iodine, 10

grains. In four cases, when a pelvic abscess seemed unavoidable, under the use of this paint, the exudation fairly melted away.

New Reagent for Uric Acid.—Mr. Didelot recommends, in the "Répertoire de Pharmacie," a new and simple method for detecting uric acid by guano, bird manure, etc. A few drops of nitric acid having been poured on a small quantity of the dry substance, when a glass rod is dipped into the mixture and rubbed on a spatula or a bright piece of iron, the metal immediately assumes a Prussian blue color. The reaction, according to the author, is extremely delicate—more so, perhaps, than the usual ammonia test.

Extract of Beef.—Bouchardat warns against the incautious use of this extract, under the mistaken notion that an increase of dose will be followed by a corresponding increase of benefit. Both he and Stuart Cooper have shown that large doses of the extract are quite injurious. He further asserts that it can not at all be compared to meat-juice (expressed in the cold from raw meat) as a strength giver.—*Bull. Therap.*

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

Cyclopædia of the Practice of Medicine. By Dr. H. Von Ziemssen, Professor of Clinical Medicine in Munich. Vol. IV. Diseases of the Respiratory Organs. By Dr. Fraenkel, of Berlin; Von Ziemssen, of Munich; Drs. Steiner, of Prague; Riegel, of Cologne; and Fraentzel, of Berlin. Translated by Drs. J. B. Yeo, of London; J. S. Cohen, of Philadelphia; A. B. Hall, G. M. Lefferts, of New York; and Edward Schauffler, of Kansas City. A. H. Buck, M. D., of New York, Editor of the American Edition. William Wood & Co., New York. 1876.

As the readers of this Journal are perfectly familiar with the publication of this Encyclopædia, nothing will be said in regard

to its objects, plans, originators, etc. The volume now presented is volume four. There is no order in the manner in which the volumes are published. Apparently, as the material for any number is ready, it is put to press, without any reference to the volumes which have preceded or are to follow it. One can not say that the last shall be first and the first last, but it will be safe to say anything less than this, as to the numerical sequence of the volumes.

The present volume has been issued for several months. One of the most prominent articles is that on croup, by Steiner; though there is nothing really valuable in it that is not to be found elsewhere. Dr. Steiner's views in regard to the pathology of croup are very indefinite and unsatisfactory. He at times writes of the pathology of croup in such a manner as to make no difference between it and that of diphtheria; while at other times he regards the two diseases as separate and distinct. He says, for instance, that these two diseases are "only varieties of one and the same process, * * * which at one time makes its appearance as croup and at another as diphtheria." In contradiction of this clear admission as to the identity of these two diseases, he says elsewhere that "croup is not a contagious disease," but that diphtheritic croup possesses this quality in a marked degree." His best friends must be surprised at such a manifestation of confusion and contradiction. Judging of him by his writing, it is impossible to define his views in this important connection; for to use a homely Western phrase, "he carries water on both shoulders." With many writers, he recognizes, as to causation, a croupous diathesis; yet he believes diphtheria to be contagious. He repudiates the doctrine advocated by Hallier and Oertel, that "croupous diphtheritic exudation" consists chiefly of fungi, and believes very sensibly that any fungi present in such exudations are there accidentally or incidentally, and have nothing whatever to do with the pathological process. What is surprising is that Dr. Steiner really endeavors to show by argument that the dyspnœa of croup is not always due to obstruction in the tracheo-laryngeal area, but is at times caused by accumulations of mucus or pus, or muco-pus in the bronchial tubes. He states

as proof of the correctness of his views that the dyspnœa of croup is not always relieved by tracheotomy. Really one can not read this without amazement; it is like reading an argument to prove the rotundity of the earth or the existence of the sun. The facts set forth with so much argument and claimed by him, are universally admitted and are easily demonstrable. Indeed, the very value of "Trousseau's sign" in connection with croup is based upon the recognition of the fact that in the dyspnœa of croup the trouble may be laryngo-tracheal (to be relieved by tracheotomy), or in the lower air passages (when tracheotomy would be wholly inadmissible). There must be very few ordinarily well-prepared practitioners who are not entirely familiar with these facts. He states that croup appears oftenest in children who do not take cold easily, and that those children who after exposure become hoarse and have a hoarse cough are not likely to have croup. It must be confessed that this is a most novel opinion, and one wholly opposed to that usually entertained.

In regard to treatment, he condemns anti-phlogistic measures. He advises the free use of ice applications to the throat; gargles; the touching of the membrane with caustic, and the free use of emetics. After examining this contribution of Steiner, one is forced to withhold even faint praise. His views in regard to the morbid phenomena of croup, its causation, symptoms, etc., are confused and contradictory, while his treatment does not differ from that of thousands of practitioners, and does not include the valuable resources adopted by many.

The article on pleurisy is much better. The author advocates active treatment of it in the first stage; local bloodletting; cups; leeches; calomel; nitrate of potassa, and even mercurial inunction. Quinine he uses freely, but condemns cold applications to the chest. Contrary to the judgment of many of his countrymen (as he states), Dr. Fraentzel, the author, advises the early performance of paracentesis thoracis. He very properly condemns any delay if there be any evidences of empyæma. After the operation for either empyæma or hydrothorax, he uses the irrigator freely and establishes free drainage. He gives no testimony as to trephining the rib for persistent empyæma. It

is curious to observe how little is known of this valuable method of treating empyæma; a method long in use in America, and only recently claimed in a German journal (the "Berliner Wochenschrift") as something original.

Dr. Riegel furnishes articles on "Tracheal and Bronchial Stenosis," on "Foreign Bodies in the Trachea and Bronchi," and on "Bronchial Catarrh." These articles are voluminous, and the author devotes much space to the discussion of controversial points in pathology, and to the analysis of many theories. It must be confessed that such a presentation of these subjects can not obtain popularity, and is done at the expense of the better basis of clinical phenomena and therapeutic results. Not that any one could censure an author for the most minute exposition of pathological details (such a course every rational practitioner exacts from reputed authorities), but when, as in these articles, so much space is given to the discussion of pathologically controversial matter, and to the consideration of many elaborate theories, it is impossible to deny that while those fond of polemics in physiological or pathological histology may be deeply interested, the great mass of practitioners, the workers, will turn away from such material with dissatisfaction and fatigue. One practical and valuable suggestion made by Riegel is that the muriate of apomorphia can be given with better effect than any other emetic known. It may be given subcutaneously, promptly, easily and thoroughly without any disagreeable secondary results.

It is not the fashion of the Press to disapprove of or criticise sharply the materials presented in Ziemssen's Cyclopædia, but criticism here as elsewhere should always be free and frank; if it is just, it is good; if unjust or incorrect, it will be condemned. The time was, when in regard to German dogmas or dicta English-speaking nations were in the habit of tersely endorsing upon them "*Marcus dixit ita est;*" but that time has past. In medicine there is no longer a Marcus, either in Germany or elsewhere. The spirit of medical criticism has changed, and in the entire rank and file of the great medical army there is now that independence and efficiency of thought which weighs the acts and not the pretensions of leaders. It

is the medical material and not the medical man which secures allegiance, and material comes now from the pen and work of every civilized nationality. Examined with these just views before him, the reader can not give to this volume the unmixed praise which it has from the Press so generally received; and this judgment is the more readily published, for as there is so much to unqualifiedly praise in this Cyclopædia the indication of blemishes only renders the virtues and value of the work more prominent. Indeed, there is no one publication which furnishes to the reader so much of instruction and profit as may be found in the voluminous volumes so far published. Messrs. Wood & Co. have issued the work durably and in a most creditable manner.

NOTE.—Notices of many new works will appear in the January number of this Journal. There is not space for them in this issue.

Walsh's Physicians' Combined Call-book and Tablet.—The plan of the book makes it good for any year, or at any time in the year, and it need not be thrown aside until filled. It enables the physician to write the name, address, and number of visits paid each patient per week, or, by using additional pages, as many more as may be desired. A most convenient and novel feature is an *erasable tablet* bound on the inside of the front cover upon which memoranda may be written. Its contents are, erasable tablet; calendar; sign table; table of drops to the fluid drachm; graduated table for administering laudanum; table for regulating doses of medicine for children; table of abbreviations; poisons and their antidotes; formulæ and doses of medicine for hypodermic injections; formulæ and doses of medicine for inhalation; formulæ for suppositories; formulæ for medicated pessaries; table for ascertaining the duration of pregnancy; maximum doses and daily aggregate of poisonous remedies; disinfectants; relation of metrical weights to weights of the U. S. Pharmacopœia; relation of metrical measures to measures of the U. S. Pharmacopœia; diagnostic examination of the urine; directions for making post-mortem examinations; treatment of asphyxia from drowning, etc.; list of important incompatibles; list and doses of important remedies; blanks for call

list; blanks for obstetrical engagements; blanks for vaccination engagements; blanks for nurses' addresses; blanks for cash received; pocket for bills and prescription blanks. A most convenient and excellent book. Mailed, prepaid, for $1.50. Write name and address plainly and in full.

Physicians' Visiting List.—This standard and well-known book, published by Lindsay & Blakiston, of Philadelphia, has just been issued. The number for 1877 is fully equal to the best that have preceded it. It may be purchased for use among any number of patients daily; from 25 to 50. The book is too well and favorably known to need further description or any eulogy.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

The Origin of Scarlatina.—By T. Britton, M. D., Halifax.—Scarlet fever is an infectious febrile disease characterized by a diffuse scarlet efflorescence on the skin, and the mucous membrane of the fauces and tonsils, commencing on the second day of the fever, and declining about the fifth, being followed by desquamation of the cuticle. The period of incubation is four to six days. The cuticular scales given off during the desquamating stage are believed to be the main agents in the propagation of the disease. It is a wide-spread belief that scarlatina is never now generated *de novo*, but always produced by infection from a previous case. Dr. Carpenter, however, has published cases which seemed to show that the poison of scarlet fever might be generated afresh by decomposing blood and animal refuse. The author, as the result of many investigations into the origin of cases of scarlatina, felt disposed not only to accept Dr. Carpenter's hypothesis, but to think that house slops and sink waste which contain a certain amount of animal matter, might also generate the poison. In illustration of the former mode of origin, a case was brought forward in which

the offal of a horse, killed on account of an injury, was, after having been for two months buried in a dunghill, scratched up and devoured by two dogs, who forthwith repaired to the houses of their respective masters, and, although promptly expelled, filled them with an abominable stench. Several persons who were exposed to the stench sickened at once. Some of those who were so taken recovered after suffering a few days from vomiting and purging, but one child, six days afterward, came out in the red rash of scarlatina, and died a fortnight afterward from nephritis. A second child in the same house commenced a week after the first, and a third followed. The local circumstances were such that all chances of infection from a preëxisting case could be excluded with a high degree of certainty.—*Brit. Med. Jour.*

Jaundice from Atresia of the Bile-duct through Cirrhosis of the Head of the Pancreas.—In the "Annali Universali di Medicina e Chirurgia," Dr. Tibaldi describes a case of a married woman, aged thirty-five, who had enjoyed good health up to two months before she was first seen. She had gradually become jaundiced, and had some oppression and pain in the epigastrium and right hypochondrium, with much loss of appetite; she occasionally had slight fever. On examination Tibaldi found the liver enlarged and resistant; the gall-bladder distended and reaching as far as the umbilicus; the spleen enlarged and resistant, and extending as far as the left iliac region; tympanitic abdomen; regular discharge of colorless fæces; urine scanty, of a yellow-green color; the skin yellow and itching; the impulse and sounds of the heart indistinct; the pulse weak and slow, intermitting at every tenth beat. At the necropsy the head of the pancreas was found enlarged to double its normal size, with a mass of puriform matter in its centre, and the bile duct was atrophied for some distance from its point of entrance into the duodenum. Dr. Achilles Visconti found, on histological examination, hyperplasia of the interstitial connective tissue, with pyoid globules and cells of cylindrical epithelium in the pancreatic duct mixed with mucus, without any trace of cancerous formation.—*London Medical Record.*

The Use of Aromatic Sulphuric Acid in Necrosis.—The Boston "Medical and Surgical Journal," for August 17th, contains the history of a case of necrosis of the alveolar process, that was cured by daily injection of aromatic sulphuric acid in the proportion of a drachm to the ounce of water, into the substance of the spongy swelling that surrounded the diseased bone. The teeth were very loose, and the case was one that apparently called for operation; under the above treatment, combined with the use of tonics and an animal diet, the teeth gradually tightened, and in a year the cure was complete.

Compound for Removing Grease-Stains from Clothing.—An earthy compound for removing grease spots is made as follows: Take Fuller's earth, freed from all gritty matter by elutriation with water; mix with half a pound of the earth so prepared half a pound of soda, as much soap, and eight yolks of eggs, well beaten up with half a pound of purified oxgall. The whole must be carefully triturated upon a porphyry slab; the soda with the soap in the same manner as colors are ground, mixing in gradually the eggs and oxgalls previously beaten together. Incorporate next the soft earth by slow degrees, till a uniform thick paste be formed, which should be made into balls or cakes of a convenient size, and laid out to dry. A little of this detergent being scraped off with a knife, made into a paste with water, and applied to the stain, will remove it.

A School for Ambulance-Bearers.—A school of a novel kind has just been established at Vincennes, in the court-yard of the Military Hospital. Every day a number of soldiers give instruction in the art of erecting as rapidly as possible tents for the use of ambulances in campaigns. The tents are immediately furnished with their bedding and all other appurtenances for the supply of from six to twenty patients. At a given signal, the bedding, etc., is removed, the tents are struck, and the patients are supposed to be conveyed away in carriages beyond the point of danger. Experiments are tried of all apparatus proposed to the directors of the school, all of which are undergoing successive examinations.—*Union Med.*

MEDICAL NEWS.

'Nulla dies sine linea."

Prof. Laycock, of the University of Edinburgh, is dead. Dr. Grainger Stewart has been elected to take his place.——The distinguished Simon, of St. Thomas' Hospital, London, has been compelled to retire from that Institution, the limit of age having been reached.——Streets have now the dust kept down by the liberal sprinkling of chloride of calcium over the ground; its affinity for water is so great that it soon deliquesces and keeps the streets moist.——The great Desault has received the justice so well deserved. His bust has been erected at Lure, the place of his nativity, with public ceremonials of the most imposing nature. The poor peasant boy, the grand surgeon, the great teacher and noble man, has thus been accorded the tribute of full recognition and faithful remembrance.——Professor Huxley, in his recent visit, received deserved social and scientific honors, and returned to England with $5,000 contributed for his public addresses.——The mesquite gum of Texas is said to be as valuable as gum arabic, and is rapidly taking its place.——In San Francisco the occupant of any house in which small-pox prevails is fined $500 if he does not report the fact.——The London medical colleges are abandoning the delivery of formal introductories to each course.——A dental hospital has been established in Dublin, Ireland; an excellent movement.——Macmillan & Co., of London, England, have issued a "Course of Elementary Instruction in Practical Biology," by Huxley. It is a popular work, and will be generally purchased.——Russian and Austrian surgeons have been ordered home; *for awhile.*——The International Medical Congress voted at times very recklessly, endorsing views exceedingly problematical and refusing to endorse those generally adopted. It could not come to any conclusion in regard to the antiseptic method in surgery.——The "Boston Medical and Surgical Journal" contains the report of another death from the inhalation of ether. It is contributed by Dr. A. Mathewson.——Recent experiments demonstrate that wine

of iron and the tincture of iron are about the only preparations of iron that injure the teeth.——In the libel suit against the "Boston Medical and Surgical Journal," judgment was given in favor of the defendants; *veritas magna est, etc.* Gagging the press does not meet with legal recognition there.——Lücke, of Strasbourg, has accepted the vacant chair of Simon, of Heidelburg.——The new medical directory of the physicians of the United States will be issued in December, by Dr. D. G. Brinton, of Philadelphia. Price, $5.50.——Dr. Thomas Dwight has resigned the chair of anatomy in the Medical School of Maine. ——There are sixteen women now in attendance on medical lectures at Paris.——The Calabar bean ointment has been found to be an excellent lactagogue when applied over the mammæ. ——A bronze statue of Sir James Simpson has been erected with due ceremony in Edinburgh.——Dr. James F. Pressley, of Santa Fe, New Mexico, reports a forty days' incubation of vaccine. The vesicle then formed and maturated well.——The late meeting of the Tri-States Medical Society (Indiana, Illinois, and Kentucky), at Vincennes, Indiana, was a great success, socially and scientifically. The proceedings will be soon presented to the readers of this journal.——Dr. William Playfair has been called to Malta; the Duchess of Edinburgh wished to see him. He has returned home, and the Duchess with her increased family, is happy.——The distinguished Isambert, of Paris, has passed away.——Sieveking delivers the next Harveian oration, George Johnson the next Lumleian lectures, Brunton the Gulstonian, and Braxton Hicks the Croonian.—— In the Russian army there is a surgeon for every 407 men; one assistant surgeon for every 161, and one apothecary for every 3,454.——Dr. Brown-Séquard has made London his future home.——The Italians have erected a bust in memory of Andrea Cesalpino, who, they assert, discovered the circulation of the blood. It remains for Dr. Sieveking, who delivers the next Harveian oration, to give the Italians a little information in this connection. Harvey would never have enjoyed his macaroni could he have foreseen this diabolical movement.—— Who can furnish a report of the yellow fever epidemic at Savannah and Brunswick, Georgia? The scourge has ceased.

——There are yet a few physicians of Louisville who are not members of the Board of Trustees of Public Schools. How long it may be before all are thus engaged it is difficult to say. From present appearances the time will not be long. The highest style for the medical signature here now is M. D., M. B. T. P. S. KY.——The medical proceedings of the Jefferson County (Ky.) Medical Association (including in its membership the physicians of adjoining counties) will hereafter be published exclusively in this Journal.——Wm. R. Warner & Co. have received the Centennial award for their Soluble Sugar-coated Pills. This is the third World's Fair prize awarded to them for their excellence over competition at home and abroad. R. A. Robinson & Co., of Louisville, Ky., are agents.——The unusual size of this number of the Journal has delayed somewhat its issue.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

Pancreatomy.—In the "American Medical Weekly" of November 11, 1876, there is published the report of a case of pancreatomy by Dr. B. B. Allen, of Sebastopol, California. The patient was an Indian thirty-five years of age, who had been stabbed in many places. From a wound just above the left kidney the pancreas protruded. The protruded mass was seven inches in length. It had been exposed for about twelve hours, and was "partially putrefied." He received this wound on the 9th of October. On the 11th, after chloroforming the patient, the protruded mass was surrounded by ligature, and the distal end (all beyond the ligature) immediately exsected. The patient had no unpleasant symptoms whatever, and has made a complete recovery.

As the exchanges seem to regard this as a very remarkable case, and a most remarkable recovery, it will not be out of place to offer a few facts in this connection.

In the "Transylvania Journal of Medicine," Vol. I., p. 116, there is published a case which was treated by Drs. Caldwell, Roberts and Heard. The patient was a negro owned at the time by Judge Bibb. The part protruded was four inches in length and was gangrenous. It was removed by the bistoury. The patient recovered.

Kleburg, of Odessa, reports the case of a soldier who was stabbed, with a portion of the pancreas protruding; the mass was ligated and excised, and the patient recovered.

Laborderie relates the case of a young girl who was wounded by falling upon a knife. The pancreas protruded through the wound (in the epigastrium), and was ligated and excised. The girl made a complete recovery. (Gazette des Hôpitaux, 1856.)

Surgeon J. G. Thompson, of the Seventy-Seventh New York Regiment, reports the case of a soldier who was wounded at Cedar Creek October 19, 1864. The pancreas protruded so as to present a mass the size of a hen's egg. A silver wire was passed around the mass, and it was successfully removed. The patient recovered completely.

Many fatal cases of protrusion of the pancreas are on record, and also a large number of fatal cases of wounding of the pancreas where the organ did not protrude.

These five cases of protruded pancreas with operation and recovery show that the general impression in regard to the fatality of such wounds is not entirely sustained by the facts. Surgeon George A. Otis, of Washington, D. C., has given much time to the examination of such wounds, and his report to the Surgeon-General, U. S. A., is a model of accurate, fruitful research; and, like all of his papers, a model also of clearness and brevity. The writer is indebted to him for many facts in regard to such wounds, and for many of the facts herein presented. The case reported by Dr. Allen to the "American Medical Weekly" is being closely observed, and a further report of it will be given.

Immorality at Oxford College, England.—The Dean of Chichester has published a pamphlet on this subject. He says that

at Oxford there are 536 licensed lodging-houses for students; the number of rooms being 1,082. It is asserted by the Dean that "at the beginning of the term, lodging-house keepers hire very young girls, with or without character, from the neighboring villages to wait on the under-graduate lodgers. They give merely nominal wages, and allow these girls unbounded liberty, and instruct them to obtain of the lodgers what gratuity they can. When vacation begins the girls are discharged." If such a statement did not issue not only from an entirely reliable but fully-informed person, it would be dismissed as sensational and unjust, but reaching the Public through such a source, the authenticity and truth of the statement are beyond dispute.

It is difficult to know what comment to make upon such a revelation. It often happens that the text of a discourse is stronger and more to the point than all that may be said in the subsequent exposition of it. Is this not a case in point? When that immortal poet, orator, and wit, poor Richard Brinsley Sheridan, in one of his frolics was "picked up drunk" in a London gutter and by a London policeman, he was asked by the latter what was his name. With infinite humor, and indeed infinitely amused at the coming answer, he said, "I am Mr. Wilberforce." The startled officer of justice was so overwhelmed at this picture of debauchery, where he had supposed only the highest purity to exist, that he released his prisoner in silence, and the facts were afterwards made known only by accident. Is the Public to treat Oxford as did the policeman treat the scapegrace? Is it to be so startled at the enormity of such vice as to pass unpunished the perpetrators of it?

In the old days of Exeter Hall, when Wilberforce, Buxton, Sharp, and others railed at the immorality prevailing, as was alleged, among the slaves of America, the English applauded to the echo, and made no allowances for the ignorant and uneducated negroes charged with being the representatives of all this vice. What will they now say, when this same vice exists, not in "the cabins of the untutored and savage slave," but in the very heart of English society; amongst the denizens of one of her oldest and grandest universities? What will be said; but

what is more important, what will be done? Scions of Buxton and Wilberforce and Clarkson, the world summons you to the front.

Coincidences.—The list of these is endless. One of the most remarkable lately is, that just as Dr. Toner, of Washington, D. C., had suggested the use of a double system of water supply for cities and towns (one supply for culinary and drinking purposes and the other for sanitary uses), there comes a full report of just such method instituted and inaugurated at North Shields, in England. The arrangements adopted for North Shields are complete and entirely successful.

Metropolitan College of New York.—A large number of charlatans have been prosecuted in Manchester, England, on the charge of practicing without authority. It seems that they hold diplomas from the Metropolitan College of New York, U. S. What and where is that Institution?

Boston Diplomas.—There appears over the signature of an individual of Boston, Mass., advertisements in the daily papers in this section, in which advertisements there is an offer to procure for any one desiring them diplomas in medicine or dentistry. These advertisements are signed by J. R. Yuille. Who is he? Can not the medical and secular Press at "the Hub" give him what he deserves and needs?

The Close of Volume XXII.—In the midst of a political excitement and pecuniary depression unprecedented, another volume and another year of this Journal are brought to a close. When twenty-two volumes of a work have been issued, it is surely unnecessary to make for it any promises; and yet it is distinctly promised that the merits of this Journal (whatever they may be) will in future be largely increased, and the work be even more exclusively published in the interests of the Profession.

Local matters, personal criticisms, and unpleasant controversies will be banished from the pages of the Journal, and the

matter of each issue will be made of interest and value to the whole Profession. The temptation to a journalist to meet calumny, falsehood and misrepresentation with quick and full exposure is very great indeed; none know, until tried, how great is this temptation; still it can be met and will be met successfully. Experience brings many lessons, and among the most useful of these is the lesson of forbearance; the lesson of self-restraint, and greatest of them all, this lesson, the conviction that before a just and learned Profession calumnies and injustice need no exposure; they receive always from such a jury the swiftest and most fatal condemnation.

To the old patrons of this work then and to those who have not yet been numbered among its supporters, it may be said that there will be, in the incidents and emergencies indicated, an entire change in the management of the Journal. It will be published solely in the interests of the entire medical Profession.

In addition to the long list of able contributors, who for so many years have given such great value to this work, there will be added the names of many of the ablest and best writers in this country. There is scarcely a State which, during the next year, will not have represented among the writers for this work its ablest and best physicians. This statement is based upon letters received from many of the most distinguished writers and practitioners.

Under such circumstances then and with such pledges, this Journal closes another volume and another year; to commence, with another volume and with another year, through the coöperation and kindness of the Profession, the most earnest and sincere efforts for its increased welcome and greater usefulness.

The clouds hang heavily over the horizon; all are depressed; many despondent; yet there is nothing, so far manifest, to prevent a near future of peace and prosperity. May these clouds soon lift and pass away; gladdening the heart of every reader, and enabling him to unite with the writer in wishing for the medical men of this country the old "Merry Christmas" and "Happy New Year."

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